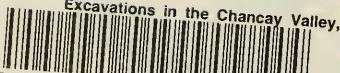


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Excavations in the Chancay Valley,



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A faint, light gray watermark of a classical building with four columns and a triangular pediment is visible in the background.

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EXCAVATIONS IN THE CHANCAY VALLEY

By GORDON RANDOLPH WILLEY

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SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF DOCTOR
OF PHILOSOPHY IN THE FACULTY OF PHILOSOPHY,
COLUMBIA UNIVERSITY

COLUMBIA STUDIES IN ARCHEOLOGY
AND ETHNOLOGY, Vol. I, No. 3

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VITA

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Introduction

PROBLEMS: THE EARLY PERIOD IN THE CHANCAY VALLEY

AT THE TURN of the nineteenth century Dr. Max Uhle conducted investigations along the Peruvian coast that were to form the basis of a systematic archeology for a large part of the Andean area. At Pachacamac (Uhle, 1903), in the Lurin valley south of Lima, he established Tiahuanaco, or Tiahuanaco-Epigonal, as a generic Peruvian style; on the north coast the concepts of a Proto- or Early Chimu¹ and a Late Chimu are Uhle's (Uhle, 1913); and in the south he recognized what is now commonly referred to as Nazca, or Early Nazca, besides, in the Ica and Chincha valleys, a later series of culture periods (Kroeber and Strong, 1924b). For both the north and the south he postulated the appearance of Tiahuanacoid ware as post-Early Chimu and post-Early Nazca. Among the early or pre-Tiahuanacoid cultures on the central coast he found a greater diversity: the early incised pottery horizons at Ancon (Uhle, 1912) and Supe (Uhle, 1925); the early period of painted pottery (White-on-red and Interlocking) in the Chancay valley; and, possibly, Early Lima in the Rimac valley (Uhle, 1908).² Of these, it was in the Chancay valley that Uhle first formulated his concept of a developed painted-pottery period for the central coast that equated with the early cultures of the north and south.

In the Chancay valley in 1904 Uhle found Late Chancay Black-on-white ware at four sites. At one of these sites he excavated graves also yielding pottery of the Epigonal and Black, white, and red geometric styles (Kroeber, 1926b, pp. 266-67). On the basis of these finds he established for the Chancay a sequence comparable to the last three Necropolis periods at Ancon (Strong, 1925) and, with the exception of Coastal Inca, at Pachacamac

(Uhle, 1903). Then, on the southern slopes of the Cerro de Trinidad, at what he designated as "Site E," Uhle discovered the White-on-red and Interlocking styles (Uhle, 1908). He recognized the Interlocking pottery as similar to sherds he had found in the fills of the Temple of Pachacamac and of the Temple of the Sun at Pachacamac (Uhle, 1908, p. 356 and Fig. 5). He then regarded the type as post-Tiahuanacoid, but the occurrence of the style in the Chancay valley, unmixed with Tiahuanaco or Epigonal material or with any of the later wares, suggested its priority to the Tiahuanacoid period of the coast.

The interlocking fish patterns found at Site E on vessels (Uhle, 1908, Figs. 4, 10; pp. 353-57), sherds, and a wall painting (Uhle, 1908, Fig. 6), Uhle related to the stylized fish design in Early Nazca (Uhle, 1908, Fig. 7). Vessel forms and the use of small, handmade adobes in construction were further evidence for strengthening the relationship with the Early Period in the south. He considered the three-color and, occasionally, four-color Interlocking ware the result of foreign influences from the south, bringing to the central coast its first high civilization. These southern influences, he felt, had stimulated the "primitive" fisher-folk of the shell mounds into altering their techniques for decorating pottery from incising to painting. The result of this fusion was the White-on-red style which then replaced the interlocking fish designs of the Nazcalike ware (Uhle, 1908, pp. 352-53). The White-on-red style, because of its simple but unique decoration, Uhle thought of as a resurgence of the "primitive" pottery-makers, and he later referred to the White-on-red occupation of the Cerro de Trinidad as one of the five recorded sites of the early shell-mound or fishing culture, stating that it was only "a little different" (Uhle, 1908).

The story in the ground at Site E from

¹ Following Kroeber, 1927, I am using the term "Early Chimu," throughout, rather than "Proto-Chimu."

² Kroeber, 1927, has a summary of this.

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which he derived this sequence of first, Interlocking, and second, White-on-red is complicated. In excavating graves, Uhle found flexed burials covered with large sherds of the Interlocking style; and in these same graves were White-on-red vessels. In some of the graves he also "occasionally found unbroken vessels of the older type [Interlocking]." From the evidence of Site E, Uhle argued that the White-on-red people had exhumed pottery from the earlier Interlocking graves and reburied it with their own dead, often using broken Interlocking jars to cover the burials (Kroeber, 1926b, pp. 296-98).

Kroeber, in a paper dealing with the Uhle collections and with a consideration of the relationships of the two styles at Site E, advances Uhle's scheme with reservation and points out the important weaknesses (Kroeber, 1926b, pp. 283-84). The transference from incised pottery to painted, as from Ancon-Supe ware to White-on-red, seems very abrupt. There is actually little resemblance between the Early Ancon design motifs and those of the White-on-red. Furthermore, the interposition of the considerably more spectacular Interlocking style between the incised and the White-on-red, with few or none of its traces being left as an incorporated part of the later style,

makes such a transition on the spot much less than probable. Technically, the derivation of a sequence based upon the possibility of a later people robbing earlier graves is also extremely insecure.

The problems for investigation of the Early Period in the Chancay valley are formulated from this work of Uhle's at Cerro de Trinidad, Site E. The major objective for research is the determination of the relationship between the White-on-red and Interlocking ceramic styles at that site or at any other site in the valley. This larger problem can be broken down into three subdivisions: (1) Is the relationship one of time difference, and if so is Uhle's sequence correct? (2) If the relationship is one of sequence is it a developmental story or is there a hiatus between the two styles? (3) A more refined point, what is the significance of the various substyles, or types, within the Interlocking group?⁸ Secondary objectives are those present for any archeological exploration: the recording of data on all features and artifacts found and the relating of these, as culture traits, into groups or periods on the basis of association or style. The essentially historical nature of the problems, coupled with abundant occupational rubbish at Site E, made the stratigraphic method the obvious approach.

PROBLEMS: SEQUENCE FOR THE CENTRAL COAST OF PERU

It is the general archeological opinion, and it has also been specifically formalized (Kroeber, 1925a, pp. 231-32), that the development of Peruvian coastal cultures is encompassed in four great periods: (1) an Early or pre-Tiahuanacoid; (2) a Middle or Tiahuanacoid; (3) a Late I or post-Tiahuanacoid; (4) and a Late II or Inca. This division has been observed for the north, south, and central coastal regions. The Early or pre-Tiahuanacoid Period for the central coast is less well demonstrated than Early Chimu or Early Nazca. The early or "primitive" shell mound culture of Ancon and Supe may fill a part of this time gap for the central coast and equate with a part of Early Nazca, as Uhle claimed (Uhle, 1920, p. 11). A stylistic similarity between the Interlocking of Chancay and Nazca, as Uhle (Uhle, 1908, pp. 353-

57) and Kroeber (Kroeber, 1926b, pp. 287-89) have pointed out, also would suggest a partial contemporaneity of Interlocking with the Early Period of the south. Other data bearing on the Early Period for the central coast, and its more widespread implications, were obtained by Uhle in the Rimac valley after his work in Chancay (Uhle, 1908, pp. 359-67). The style and culture which were found at several places near Lima he termed "Proto-(Early) Lima."

Since Uhle's work on the problem of the Early Period in the Chancay-Rimac area, Kroeber, Means, Tello, Strong, and Lehmann and Doering, among others, have examined the data and ventured opinions. Going from

⁸ Kroeber, 1926b, pp. 279-82, refers to some of these in his "b" and "c" divisions and also, in part, in his "a" division of the Interlocking style.

the specific problems of the Early Period in Chancay to the general ones of a central coast sequence, the second major problem of this report is to consider Uhle's and these later opinions in the light of any new data from Chancay. Using the recent Chancay excavations

tions and results as a base datum, we propose to refer to it the Supe, Ancon, Rimac, and Pachacamac culture sequences. Correlations farther afield than the central coast are made when these outside influences serve as markers in the local time scale.

METHOD OF PRESENTATION

The greater part of the body of this report is devoted to the excavations at Cerro de Trinidad, Site E, and an analysis of the materials found at that site. The first section deals with Site E, the actual operations of excavation, and a description of the larger archeological features such as strata, structures, and burials. The second section is a descriptive analysis of the pottery, vessels and sherds, from Site E. The third section is a similar treatment of the remaining artifacts from Site E. The fourth section is an exposition and interpretation of the cultural stratigraphy at Site E as based upon the pottery types. When

possible, this stratification is related to physical strata, structures, burials, and small artifacts. As such, the section is the concluding one for Site E. The fifth section briefly summarizes excavations and cultural materials found at Baños de Boza, a small Early Period site in the Chancay valley. "Conclusions: Comparisons and Sequence" is, in the first part, a summing up of the Early Period in the Chancay valley. In the second part, it is a comparison of the Early Period Chancay cultures with cultures of other valleys of the central coast and a consideration of the problem of culture sequence.

Excavation at Cerro de Trinidad, Site E

THE SITE AND ENVIRONMENT

THE CHANCAY, the first valley to the north of the converging Rimac and Chillón valleys, is separated from these by forty kilometers of desert hills. It is a triangular patch of green, twenty kilometers broad on the coast and narrowing sharply to an apex as it goes inland. It is nourished by the Río Chancay and by its irrigation system, which drains out of the Sierra, beginning some eighty or ninety kilometers back from the coast near the Lima-Junín departmental border. The valley and the river are quite typical for the central coastal region of Peru. In size the valley is less than those of Lima, Cañete, and Chincha; the Chancay has a total catchment basin of 2,200 square kilometers and an average annual runoff of 605 millions of cubic meters (Kroeber, 1930a, p. 76). Today it is an important agricultural area, mainly for staples such as flax, although corn and other foodstuffs are grown in small quantities.

A little south of the center of the mouth of the valley an isolated land mass of rocks and sandy hills separates the lower Chancay into two parts. The smaller and more southerly is the valley of Pasamayo, through which the Río Chancay flows to the Pacific. The larger arm, or the Chancay valley proper, in which the pueblo and port are situated, is to the north of this dividing land mass. Fronting the isolated group of hills and separating them from the beach, which is about half a kilometer away, is a narrow strip of cultivated flat lands, the *salinas*. These extend from the Pasamayo arm almost through to the Port of Chancay. Cutting them off from the port and the Chancay valley proper are two large hills which extend out toward the sea from this isolated hill group. The larger and more inland of these two interposed hills blocking

the *salinas* from the port is the Cerro de Trinidad; the other, La Punta, extends out into the sea, a rocky guano crag on its seaward face.

In 1904, an old railroad cut ran through the low saddle of small hills and ridges which connects the Trinidad with La Punta. Today, the modern Pan-American Highway, running from Lima up the coast, follows the same cut. From Uhle's description (Kroeber, 1926b, pp. 294-96) of Site E, on the south slope of the Trinidad, there has been little change in the last forty years. Sherds, adobes, and deep refuse are visible all along the road cut now as then. On the north side of the Cerro de Trinidad is the large, much-looted Late Chancay cemetery which Uhle called Site A (Kroeber, 1926b, pp. 266-67). This cemetery covers several acres, extending on both sides of the highway. A short distance along the highway toward the Port of Chancay a large *huaca* has been sliced by road-building operations. Late Chancay Black-on-white sherds in this cut suggest that this structure was related to the Site A cemetery. In the opposite direction on the highway, a kilometer away from Site E, towards Lima, there is a large Late Chancay site on the inland side of the highway. Walls, courtyards, and mounds show this to be an occupation rather than a burial site. This site was not mentioned by Uhle, but recent excavations conducted here by the Institute of Andean Research⁴ revealed Late Chancay sherds and rectangular, brick-form adobes. On the east side of the *cerro*, overlooking this big Late Chancay site, is a large rectangle or enclosure, several hundred meters in each di-

⁴ These excavations, conducted by the author of this paper and Mr. J. M. Corbett, will be reported upon at a future date.

mension, built of small, rough rock. Cultural affiliations of this structure are unknown. Across from Trinidad, on the landward slope of La Punta, are smaller rectangles of stones, apparently the same remarked upon by Uhle (Kroeber, 1926b, p. 295). There are but few sherds scattered among these La Punta structures, but in one exploratory walk on the stone-covered slope the writer picked up two Interlocking style fragments.

As to Site E itself, the sherds found in the road cut were of the Interlocking and White-on-red styles with an occasional fragment of Late Chancay Black-on-white. The site extends from the lowest slopes of the Trinidad, which are in some places on the seaward side of the highway, back up the hill for 150 to 200 meters. East and west the extent of scattered rock and sherds is nearer 400 meters.

Actually, the occupation area is south-southeast of the hill instead of due south. A series of weathered and irregular natural terraces marks this side of the *cerro*. (They are indicated on the map, Fig. 1, in approximate two-meter contour intervals.) These terraces are in some places covered with scattered rock and rock-filled pits. Sandy patches, relatively free from rock, appear at intervals. There are few definite surface evidences of walls on Site E. The rectangle of stones, presumably an old structure, indicated on the map (Fig. 1), was the only one noted. Near the western end of the occupation, in a large sandy area, is a series of drift-filled trenches, Uhle's old excavations. It was impossible to tell how deep these had penetrated, but their extent and location is marked on the map, with reference to the recent work, as accurately as possible.

EXCAVATION

To determine culture stratification, seven pits were excavated on the south slope of the Cerro de Trinidad. All pits were made 3 by 3 meters at the top. Each was excavated to sterile soil. In two cases pits were excavated contiguously in order to obtain more material and data from important locations. As it is difficult to dig a small hole directly into deep rubbish, extensions or subsidiary excavations were necessary in one instance to facilitate dirt removal and for safety.

Sherd material was saved from .50- or .25-meter levels, depending upon the particular conditions. From two pits every sherd was saved for later laboratory study. From the others plain body sherds were discarded in the field, tabulations being made per level. A number of burials were recovered from the pits. In nearly every instance these were discovered in the sand below the rubbish, and the graves had not disturbed the overlying soil. Burials and features such as walls and house floors which were encountered in either the pits proper or their extensions will be descriptively treated in this section and later discussed with relation to the stratification.

PIT I

Along the lower slope of the *cerro* the road cut exposes deep rubbish, rock, and adobe

structure. Spoil dirt from the road excavations has been heaped back over the bank, but a few meters north of the road the ground appears undisturbed. Pit I was located in this area and oriented to the four cardinal points.

Level 1, 0-.50 meter deep, revealed loose dirt, sand, rocks, and sherds. Sherds were very weathered and sand-blown. They were abundant in the level, and included Interlocking, plain white, and Chancay Black-on-white types.

In Level 2, .50-1.00 meter deep, the soil changed to almost pure sand. Sherds became more infrequent with increasing depth. Burials 1 and 2 of Pit I were found at .50-.80 meter below surface in this level. Burial 1, an adolescent, was located .70 meter from the northwest corner; and Burial 2, a small child, was almost directly beneath the northeast corner of the pit, with part of the burial extending outside the area of the pit. There were no accompanying artifacts with either burial. Below 1.00 meter there were no sherds or evidences of occupation. The pit was carried to a depth of 1.90 meters.

PIT III

Because of the similarity of the location of Pits I and III the latter is discussed before Pit II.

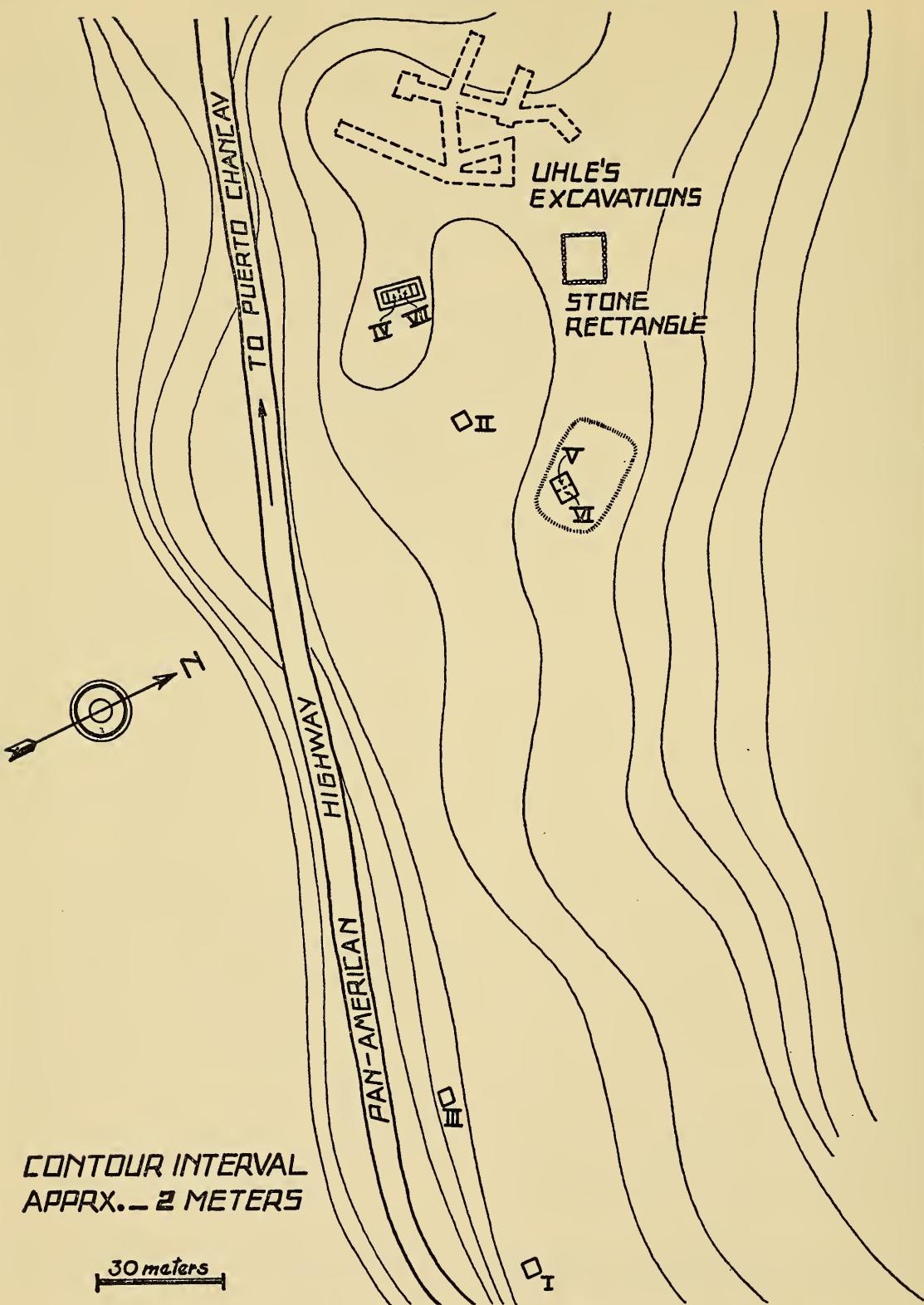


FIG. 1. MAP OF CERRO DE TRINIDAD, SITE E, CHANÇAY VALLEY

Pit III was located 45 meters west and a little to the north of Pit I. Both of these pits are on the lowest main terrace, or shelf, above the highway. The present surface of this terrace is sandy and relatively free from the loose rock that is so common on the slope of the *cerro*.

Level 1, 0-.50 meter deep, was extremely sandy and only a few sherds were recovered, but in Level 2, splintered rock and sherds of Late Chancay Black-on-white, Interlocking, and White-on-red began at a depth of .65 meter. A few stray broken human bones appeared in the rocks and debris. At about .95 meter below surface a sand and dirt layer was struck. Sherds continued throughout Level 3, 1.00-1.50 meters deep. At the bottom of Level 3 a large, broken, plain red olla was found. Sherds from the olla extended down into Level 4, but all fragments were saved separately from the level collection. In Level 4, 1.50-2.00 meters deep, there were sherds in the upper few centimeters. The lower part of the level was of clean sand, devoid of any cultural material.

PIT II

Pit II was located 160 meters northwest of Pit III, on a higher terrace than that of Pits I and III. It is in the center of a small level area surrounded on three sides by higher ground. Rock splinters cover the surface at this point, but there are few large boulders. Surface sherds are more numerous than on the lower terrace of Pits I and III.

Level 1, 0-.50 meter deep, yielded a tremendous number of sherds. In fact, the first three levels of Pit II were tightly packed sherds and rock fragments with very little soil. Some shell and ash were also present in these levels. In Level 1, Interlocking, White-on-red, and Black-on-white types appeared together. Fragments of human bone, badly weathered, were also mixed through the sherds and rock. Owing to the superabundance of sherds, the following four levels were taken down by .25-meter intervals. There was no change in the physical nature of the pit through Levels 2 (.50-.75 meter) and 3 (.75-1.00 meter). A few fragments of dark brown decayed textile came from Level 2, and more weathered human bone was noticed. In Level 3 some loose

adobes were turned up, but these were not a part of any immediate structure. The adobes were odontiform or circular with one flat side and domed or spheroid on the other.

Level 4, 1.00-1.25 meters deep, marked a lessening of broken rock and sherds. At the top of Level 5, 1.25-1.50 meters, rock fragments abruptly left off and natural sand of the *cerro* was encountered. A few sherds came from Levels 5 and 6, but in contrast to the rich detritus above, the change was striking. In Level 6, 1.50-2.00 meters deep, an infant burial was found in the sand on the east side of the pit. The body had been wrapped in textiles, now almost entirely decayed. The position of the body was not determinable. Associated with the burial were two small plain red vessels and a small gourd bowl. From the profiles of the pit it appeared that the burial had been made in the sand previous to the deposition of the rubbish. Below 2.00 meters a test hole of an additional .60 meter was put down as a check for deeper rubbish, but only clean sand was revealed.

PIT IV

Pit IV, together with Pit VII and their several extensions, was situated on a small ridge 35 meters west and slightly south of Pit II. The ridge is a part of a contour that is approximately 2 meters higher than the area of Pit II (see Fig. 1). To the west, on the same elevation, are the old trenches excavated by Uhle. Pits IV and VII are conjoined excavations, and they were made, in part, at the same time. After Pit IV had proceeded to a depth of 3.50 meters below surface, Pit VII was begun to serve as a "step" for dirt removal from Pit IV. For convenience and clarity, they will be discussed separately at this time. This also applies to the extensions which were eventually excavated completely around the two pits.

Levels 1 and 2 of Pit IV, each .50 meter deep, passed through sand and adobe in the south end of the pit and compacted splintered rock and sherds in the north side. As in Pit II, sherds were extremely plentiful in the mass of rock splinters. Interlocking, White-on-red, and one or two pieces of Chancay Black-on-white were observed during the digging of these two levels. In Level 3, however, the lens of rock chips and sherds on the north

EXCAVATION AT CERRO DE TRINIDAD

side of the pit was exhausted. In the main, this level showed a dusty, sandy rubbish intermixed with small fragments of wood. These last, occurring in greatest concentration at the bottom of the level, suggested perishable house walls or a roof which had collapsed. This supposition was made more credible by the discovery of a clay floor, 10 centimeters thick (E on Fig. 2), exactly on the bottom of the level. Also in the west profile a puddled adobe wall, .85 meter thick (L on Fig. 2), was revealed in cross section. Sherds in Level 3 numbered about one half of those in either of the two preceding levels.

In excavating Level 4, 1.50–2.00 meters deep, it was necessary to cut through the clay floor. The adobe wall, which did not extend below the 1.50-meter mark, was clearly related to the floor. Immediately below the floor were a few centimeters of sandy refuse; next came a layer of large, rough boulders interspersed with small bits of broken rock. The boulders may have served as a foundation to the floor. Sherds of both the Interlocking and White-on-red styles, as well as large quantities of plain ware, continued through the level. Level 5, 2.00–2.50 meters deep, was much the same as Level 4, with irregular boulders, small rock, and sherds.

Level 6, 2.50–3.00 meters deep, was marked by a termination of the boulders and small rock and the beginning of compact, gray-brown detritus with only scattered small rocks. In the southeast corner of the pit there was a small pocket of animal bones.

The first extension for Pit IV was cut on the south wall of the pit after the termination of Level 6. This extension was made 1.50 meters broad, 2.00 meters deep, and 5.00 meters wide along the south edge of the pit, so that it extended 1.50 meters beyond the original southeast and southwest corners. In order to speed up the work, sherds were not saved by level from any of the extensions. Upon completion of this south extension, excavation in Pit IV proper was resumed in Level 7, 3.00–3.50 meters deep. Conditions in this level were very similar to those in Level 6.

In the upper portion of Level 8, 3.50–4.00 meters deep, another prepared clay floor (G on Fig. 2), very similar to the one at 1.50

meters below surface, was encountered. Beneath the floor, in compact rubbish, and definitely not intrusive through the floor, a burial was found in the southeast corner of the pit at a depth of 3.90 meters. The skeleton extended back into the profile with only portions of the leg bones showing in the pit. The body, that of an adult, had been wrapped in textiles and placed on some form of wooden litter or platform made of poles. There was some evidence of a crude boulder tomb about the burial, but the scattered rocks through the soil leave this open to doubt on present evidence. To judge from the leg bones, the skeleton was in an excellent state of preservation. It was impossible to be sure, but the position was probably flexed. No grave artifacts were found, although it is possible that such existed farther within the profile. The condition of the bones and the manner of burial made removal of the feature tempting, but this would have been impossible without cutting down an additional block of earth almost 4.00 meters deep. Sherds from the immediate area of the burial were plain or of the White-on-red painted types. More important, no Interlocking style sherds were noted from this level, a fact verified by later analysis.

Level 9, 4.00–4.50 meters deep, had the same dust-gray refuse as the level above. White-on-red style sherds were the only decorated types noticed. Near the bottom of the level, in the center of the south profile, was a huge olla, cracked apparently by the pressure of earth and rocks. About one third of the vessel extended into the scope of the pit. Within the olla were rocks and several of the small handmade, odontiform or dome-shaped adobes, identical with those found in the rubbish of Pit II. Here, as with the burial above, it was impossible to remove the vessel or its contents without danger of a cave-in or without time-consuming excavation. The vessel was flattened globular in shape, very thick and coarse, red-slipped, and smeared in places with a white paint.

More extensions, this time on the east and west, were excavated before carrying Pit IV down farther. These were also 1.50 meters broad and 2.00 meters deep. Together with the extension on the south, they formed a

"step" or ledge running around three sides of the pit. In the east extension at a depth of 1.25-1.50 meters below surface another huge, coarse red olla was encountered. It had seemingly been left on the clay floor. The floor was the same one recorded at 1.50 meters down in the pit proper and extended at least an additional 1.50 meters east of the limits of the pit. Like the olla at the deeper level, the one above had very carelessly painted white areas over the red slip. It was 53 centimeters in diameter, flattened globular in shape, with a flaring neck and two handles. Decayed vegetal remains and two Interlocking style beakers were found inside.

The western extension uncovered nothing of interest except the thick, puddled adobe wall which continued running in a westerly direction.

Levels 10 and 11, 4.50-5.00 and 5.00-5.50 meters deep, produced decorated sherds of White-on-red style, none of the Interlocking. At the bottom of Level 10 a rather hard, thin, ash-gray lens was broken through. Beneath this was clean, light-colored sand. The lowest sherds recovered were taken from the upper half of Level 11.

PIT VII

Pit VII was excavated contiguous to Pit IV on the north. Surface dimensions were the same, 3 by 3 meters. Unlike Pits I, II, III, and IV, no sherd counts and discards were made in the field, but all material was saved for laboratory study. Level 1, 0-.50 meter deep, was mostly fractured rock and sherds, comparable to the top level of Pit IV. Beginning with Level 2, all levels were taken down in .25-meter intervals.

Level 2, .50-.75 meter deep, was mostly sandy rubbish. A dozen or more dome-shaped or odontiform adobes came out of the northwest corner. Level 3, .75-1.00 meter deep, exposed a wall (N on Fig. 2) of small dome-shaped adobes extending diagonally across the northwest part of the pit in a northeast-southwest direction. For the time being, the wall was left *in situ*. In the lower portion of the level, abundant wood fragments, shell, and matting showed up. Level 4, 1.00-1.25 meters deep, continued through sandy rubbish. Sherds

were equally numerous in Levels 2, 3, and 4.

The small adobe wall, which had been temporarily left in place, had its foundations on the clay floor at 1.50 meters deep. This floor was disclosed in Level 5, 1.25-1.50 meters, and was the same one encountered at the same depth in Pit IV and designated as E on Figure 2. In the southeast corner of the pit in Level 5, on this same floor, a large Interlocking style pot was found smashed *in situ*. A small bed of humus, decayed wood, decayed vegetal matter, and animal bone was around the broken vessel.

On the completion of this level a large extension was added onto the north of Pit VII. Like the south extension of Pit IV this addition was 3.00 meters wider, east and west, than Pit VII, and thus extended 1.50 meters beyond the sides of the pit proper. The north-south dimension of the extension was 4.00 meters. It was excavated rapidly, and only exceptional sherds or specimens were saved. The wall of dome-shaped adobes was further followed in its course by this north extension. At 1.10 meters to the northwest of the adobe wall, and paralleling it, was a wall of large, rough stones (J on Fig. 2). Two wooden posts, about 15 centimeters in diameter and .50 meter high, had been set in the ground, through the clay floor level, between the two walls and adjacent to the stone wall. The posts were about 2.00 meters apart. Near the extreme northwest corner of the north extension, behind or on the northwest side of the rock wall, fragments of two restorable Interlocking pots came to light. These vessels appeared also to have been broken *in situ* on the Floor E level (1.50 meters below surface). They were enclosed by rocks of what may have been a part of the collapsed stone wall or of a stone-lined cist (K on Fig. 2) or grave. No bones were found in the area within the limits of the extension, and further troweling among the boulders revealed none.

After making a photographic record, the sections of the adobe and rock walls crossing through Pit VII and the north extension were removed. The dome-shaped adobes are circular, flat on one side, domed on the other, and show handprints. They range from 14 to 18 centimeters in diameter and 12 to 15 centi-

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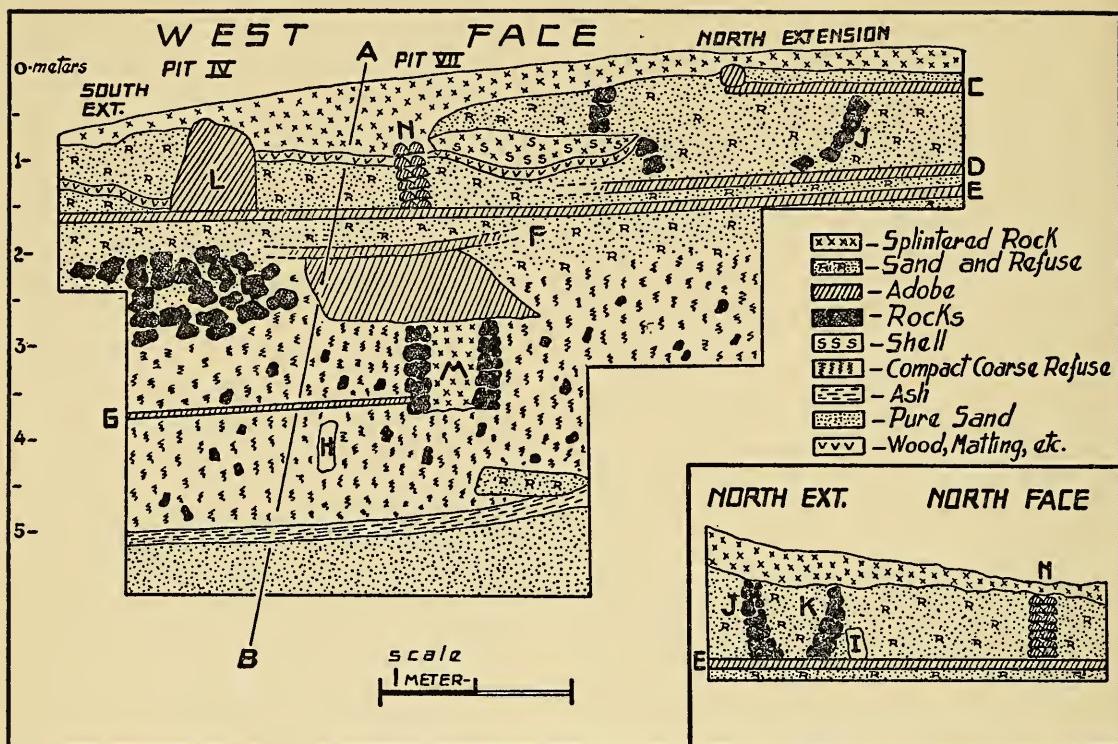


FIG. 2. PROFILE OF PITS IV AND VII, SITE E

Line A-B, approximate division of Pits IV and VII; C, D, E, F, and G, clay floors; H and I, wooden posts; J, crude rock wall; K, cist or corner of room; L, puddled adobe wall; M, rubble-filled wall of crude boulders; N, wall of small, odontiform or dome-shaped, hand-made adobes

meters in thickness. The wall had been constructed by setting a double tier of the adobes with the flat side down in mud plaster. The coursing is even and the wall well made.

Extensions 1.50 meters wide were made also on the east and west sides of Pit VII. These connected with the east and west extensions of Pit IV and formed a "step" or gallery 1.50 meters wide on the two sides of the combined pits.

A second clay floor 1.30 meters below surface was observed in the west profile of the north extension of Pit VII. This floor, marked D on Figure 2, extends south to about the dividing line between Pit VII proper and the north extension of that pit. A third similar floor showed in this same profile at .30 meter below surface (C on Fig. 2). This one was

limited in extent to the northwest corner of the north extension. It had been built above the stone wall and apparently above the adobe wall. It is evident from the structural detail of Pits IV and VII, and extensions, that these excavations were located diagonally to a building or group of buildings showing different types of masonry. The puddled adobe wall (L on Fig. 2), which also runs southwest-northeast, the wall of small adobes (N on Fig. 2), and the rough rock wall (J on Fig. 2) all appear to be related to the clay Floor E at 1.50 meters below surface. It is certain that none of the walls go below this floor. Whether any of the three walls belongs to the clay floors above E could not be determined within the limited area of excavation.

The resumption of level excavation in Pit

VII disclosed, immediately below the clay floor, a small shattered jar of the White-on-red style in Level 6, 1.50-1.75 meters deep. Level 6 consisted mainly of sandy rubbish, as did the level above. There were many sherds in the level, and, as in Levels 1 to 8 inclusive, of this pit, Interlocking and White-on-red were the principal styles.

Another clay floor (F on Fig. 2) was cut through in Level 7, 1.75-2.00 meters deep. It is quite probable that the vessel described from Level 6 had been broken on this floor.

Levels 8, 9, 10, and 11, 2.00-3.00 meters deep, were relatively unproductive of sherds. This was because a huge block of solid adobe, perhaps a base for Floor F, took up a large part of the area of the pit for more than three levels. In Level 10 in the northeast corner, not in the hard adobe mass, two very interesting finds were made. These were small, spherical, unfired clay vessels.

In Levels 12 and 13, 3.00-3.50 meters deep, compact, coarse detritus and rock replaced the consolidated clay or adobe. A thin clay floor appeared at the very bottom of Level 13. Sherds were more frequent again, below the clay. An absence of Interlocking types, noted first at Level 9, was still consistent. Below the thin clay floor (G on Fig. 2) the refuse of Levels 14 and 15, 3.50-4.00 meters deep, was identical in texture and appearance with that of Levels 12 and 13. A marked increase in sherds was noted for Level 15.

A part of the north extension was cut down deeper for ease in throwing dirt from the main pit. At a depth of between 1.50 and 3.00 meters below surface a third sealed vessel of unfired clay was unearthed. The depth below surface was approximately the same as for the two previous ones.

Level 16, 4.00-4.25 meters, had a large number of sherds, equal to that of Level 15. Soil or refuse content did not change for either Level 16 or Level 17. In the east and west profiles, Floor G and a rubble-filled stone wall almost a meter wide could be clearly discerned at Level 16. The floor joined the wall (M on Fig. 2) on its south side. The wall was surmounted by the big adobe block referred to in the description of the preceding levels.

Refuse in Level 18, 4.50-4.75 meters deep, grew slightly sandier and looser. The beginnings of a sand level, sloping to the south, could be made out in the north part of the pit. In the east profile, center, the top of a large White-on-red style olla, of the same crude, heavy ware as those from Pit IV and extensions, was noticed.

The olla extended on down into the next two levels, 19 and 20, to a total depth of 5.25 meters. Against the east profile also, but a little to the north and farther within the profile, a second similar olla was discovered while clearing the first. These were designated (Fig. 3) Olla A (the first and more southerly one) and Olla B (the second and more northerly). These two ollas proved to be burial units accompanied by large amounts of grave goods. Sherds were saved for Levels 19 and 20. There were not many in either level, as the rubbish ran out between 4.75 and 5.00 meters below surface. After the removal of the graves, an additional level, 5.25-5.50, was taken down into the sterile sand.

In the course of the work in Levels 19 and 20, the top portions of Ollas A and B were cleaned off and the sand and rubbish was scraped back from around the edges of the two huge vessels. Both were badly cracked, but appeared, in part, to have been cracked *in situ* by the weight of the earth and rocks. Neither was originally complete when used for the burial purpose. They were not burial urns but presumably halves or large portions of heavy, White-on-red utilitarian vessels forming a shield for the bodies. Placed around the outer edge of each olla were a number of smaller vessels (Fig. 3, left). Many of them were broken, but all were *in situ* grave offerings and not scattered sherds. All were of the White-on-red style.

After taking off a few of the heavy covering sherds of Olla A, the skull of Burial 1 was exposed. Further removal of the sherd tomb, piece by piece, revealed other bowls and jars of the White-on-red style within the covering. These interior offerings must have been closely packed into the grave, for most of them were badly broken and the pieces were mixed. Those vessels which were more nearly whole, both inside and outside of the sherd

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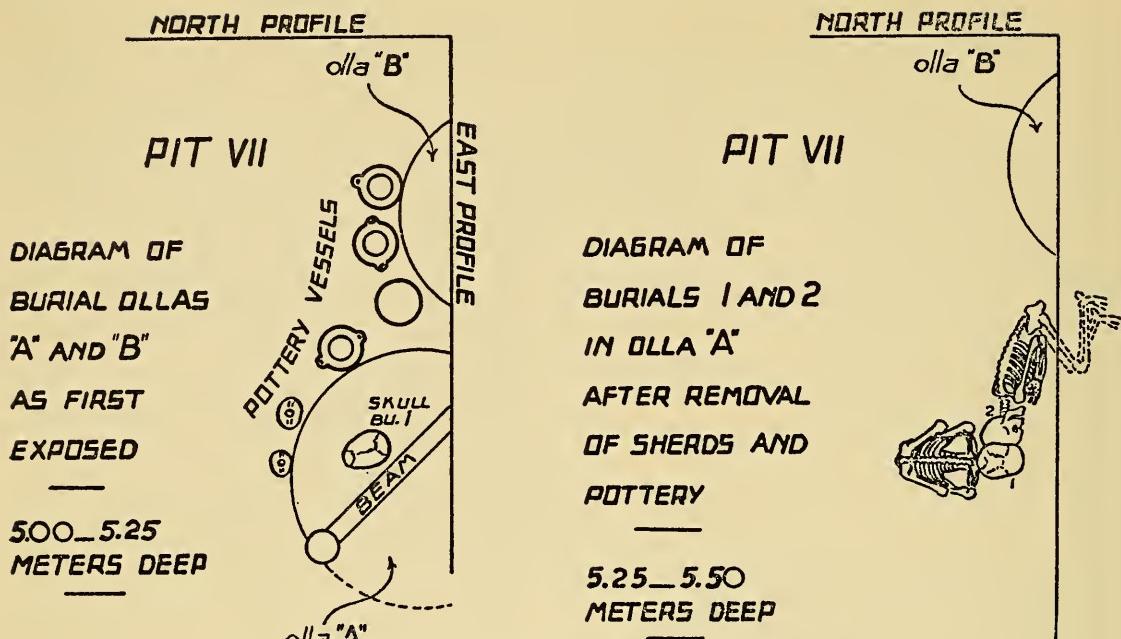


FIG. 3. BURIAL DIAGRAMS, PIT VII, SITE E

covering, contained decayed vegetal matter. A number of bowls had smaller bowls or cups over them, evidently to serve as lids. With the removal of the interior grave goods and most of the big sherds, a second burial was found just to the north of, and partly covered by, Burial 1. Burial 1 was in a kneeling position with the face down and the hands under the head. Burial 2 was also flexed but lying on its right side, facing east, with legs extending under the east profile (Fig. 3, right). In bending forward, the head of Burial 1 almost touched that of Burial 2. Both burials still showed some shreds of the textiles in which they had been wrapped. Some wooden poles, about 8 centimeters in diameter and smaller, had been employed to form either a substructure to the sherd shelter or a litter for the dead. Some of the fragments of these poles showed binding marks suggesting that they had been lashed together. As found in the grave, one pole extended out from the east profile horizontally over the bodies but underneath the large sherd covering; another pole had been set in the ground and crossed the first.

Besides the pottery offering, Burial 2 had associated with it a number of other items of grave furniture. There had been a head wrapping of fabrics and a metal mask or face covering. Shell necklaces with several forms of beads, rather elaborate stone beads or spindle whorls, and an incised clay bead or spindle whorl were the principal artifacts. Burial 2 seemed to be the important personage. There were no specific offerings with Burial 1 other than the pottery.

A few restorable pots were taken from the inside of Olla B, where they were mixed with dirt and rock. These were also White-on-red pieces. A human femur was seen within the matrix of dirt, sherds, and rock, establishing Olla B as another sherd tomb similar to Olla A. It was decided not to remove the rest of Olla B because of the difficulties presented by the overhanging dirt and rocks; however, during the night following the discovery and removal of Olla A and its contents, vandals risked gouging back into the profile and tore out most of the Olla B grave. This caused a small cave-in, and it was difficult to see whether all of the grave goods and the burial

had been looted. Large sherds of White-on-red vessels had been scattered around the floor of Pit VII. These were sacked and some of them later restored. In clearing away the debris, a hardwood pointed stick or lance fragment was brought to light. Two other pieces, possibly of the same artifact, were also picked up in the spoil dirt. All of them probably came from the Olla B burial.

PIT V

Pits V and VI were located on the top of a steep sandy mound, 50 meters east-northeast from Pits IV and VII. Pit II lies midway between these two principal sites. The mound into which Pits V and VI were excavated is 25 by 18 meters, rectangular, and flat-topped. It rises 3 or 4 meters above the surrounding terrace. The terrace is connected to, and the same height as, the ridge on which Pits IV and VII were situated.

Both pits were 3 by 3 meters in surface dimensions and oriented to the cardinal directions. Pit V, which was excavated first, was on the west, with Pit VI adjoining on the east side. Each pit was taken out in .25-meter levels with the exception of the top level, which was .50 meter deep. Sherd counts and plain body sherd discards were made from Pit V, but from Pit VI all sherds were saved.

Levels 1 to 6, inclusive, 0-1.75 meters deep, were virtually pure adobe. Layers could be distinguished in the adobe mass, which was thoroughly cracked, and there were differences in the texture of the various layers. Some were sandy; others had an admixture of small pebbles. Old pits, observed in profile, had been excavated into these adobe layers from the present ground surface. These ranged in depth from a few centimeters to almost a meter. It was impossible to tell how recent these holes were, but they were all filled with sherds of all types and other rubbish. The clay layers may have been house floors or they may have served as surfacing for a flat-topped pyramidal structure. On one of the adobe levels, at 1.25 meters below surface, a number of large rocks, some mixed with ashes and other evidences of fire, were uncovered. These may have been crude fireplaces related to a specific structural level.

Levels 7, 8, 9, and 10, from 1.75 down to 2.75 meters deep, were in rubbish similar to that in the lower strata of Pits IV and VII. Large and small rocks were scattered through the dirt, sand, and refuse. It should be pointed out that the refuse below Level 6 and beneath the adobe capping tends to be bedded on a slope to the south. This slope is much more abrupt than that of Pits IV and VII. Near the bottom of Level 10, 2.50-2.75 meters deep, a hard, irregular mass of adobe was encountered.

Burial 1 of Pit V was removed from the sand beneath this lowest adobe layer in Level 11, 2.75-3.00 meters deep. The burial was located slightly east of the center of the pit. It was a child's skeleton in extremely poor condition of preservation. It had been closely flexed but lacked the skull. Burial 2 of Pit V was found in the southeast corner of the same level in sterile sand. This second burial was also that of a child and similar to Burial 1 except that the skeleton was relatively intact. Burial 1 was accompanied by a single vessel; Burial 2 by two fragmentary jars. All three pots were of the White-on-red style.

From Level 1 of Pit V, 0-.50 meter deep, over 1,500 sherds were recovered. Of these, 617 were discarded. For the next five levels the sherd count was much lower, averaging about 150 sherds per level. Below Level 6 another concentration of sherds comparable to that of the surface level obtained. The pit was exhausted in the twelfth level, 3.00-3.25 meters deep, from which only four sherds were taken. Interlocking and White-on-red types were present in almost all levels. Interlocking sherds were more abundant than in any of the other pits and occurred in appreciable quantities from top to bottom of the excavation. A few Chanay Black-on-white pieces came out of the 0-.50-meter level, but none was found below this depth.

PIT VI

The eastern side of Pit V was chosen for the addition of another 3-by-3-meter stratigraphic test, Pit VI. On the west and south sides of Pit V the refuse sloped at a 45-degree angle away from the mound. The north side of Pit V was ruled out because of old adjacent

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excavations. From all indications it appeared that the possible center and the most evenly bedded strata of the rubbish lay to the east of Pit V.

Level 1, 0-.50 meter deep, yielded almost as many sherds as the top level of Pit V. This may have been due to a few refuse-filled shallow pits in the top half-meter, similar to those in the first level of Pit V. Likewise, Levels 2, 3, 4, and 5, from .50 to 1.50 meters deep, consisted of layers of cracked adobe. This adobe capping contained a considerable number of sherds, although, as in Pit V, these levels showed a smaller amount of pottery than either the surface level or the refuse strata below the adobe.

Near the bottom of Level 5, 1.25-1.50 meters deep, were the remains of some reeds which had been bound together to form matting. At about the same depth, in another part of the pit, a layer of hard, burned clay appeared, presumably a hearth. Immediately above the hearth area was a lens of ash, sherds, vegetal remains, shell, and midden. The burned clay stratum continued for 15 to 20 centimeters into Level 6. These evidences of occupation correspond in depth to the ash and fire-blackened rock found in Pit V.

Levels 6 to 10, inclusive, were excavated through loose to semicompact rubbish mixed with large and small rocks, lumps of adobe, and small pockets and beds of ash. The number of sherds per level for these five levels remained roughly constant at an average of about 800, four times as many per level as in the cracked adobe above. In the southeast corner of Level 10, 2.50-2.75 meters deep, the facial half of a child's skull was found without immediate associations.

In Level 1, about 50 Late Chancay plain and decorated sherds were observed in the field. No Late Chancay material was found below this level. It seems likely that these sherds were in the surface sand or in the rubbish-filled pits discussed above. Although White-on-red decorated sherds were found in small quantities throughout Pit VI, Interlocking types obtained in greater numbers in most of the levels. However, a proportional decrease in the Interlocking was noted from

top to bottom. In Level 12, 3.00-3.25 meters deep, no Interlocking sherds were present among the 126 fragments recovered.

In the lower part of Level 11, 2.75-3.00 meters deep, a burial of a child (Pit VI, Burial 1) was uncovered in the natural sand underlying the refuse. The facial fragment from Level 10 may have belonged to this individual. The skeleton was enclosed by a fragment of a large white-slipped jar. The jar had been broken into several pieces: a bottom portion had been used to cover the head and upper part of the body; the middle portion lay around the feet of the burial; and the upper part of the vessel lay off to one side. Inside the sherd covering, directly over the head of the child, was a medium-sized black and white on orange bowl. The skeleton lay on its back, with arms folded upon the chest, and legs drawn up in a flexed position. It had been wrapped in textiles which were now brown and black with decay. Orientation was northeast-southwest with head to southwest. Besides the black, white, and orange bowl, a smaller bowl with similar decoration was found with the burial. Neither of these vessels is typical of the three-color Interlocking style or of the White-on-red. In addition to the pots, a bee or bird effigy and a human figure of pottery, shell beads, and some round, hollow lumps of unfired clay were found as grave furniture.

In the basal sand, but in Level 12, 3.00-3.25 meters deep, Burial 2 of this pit was found under similar circumstances. Burial 2 was on the western side of the pit and covered and underlain by large sherds of a White-on-red style vessel. The body, that of a small child, had been wrapped in textiles and probably had been flexed. It was oriented east-west with head to the west. Directly below the huge sherds serving as a floor to the grave was a small White-on-red style bowl. Another bowl of the same style was encountered just to the south of the burial.

In the same level and sand stratum, Burial 3, another child, was found in the center of the pit. This burial was covered with sherds from a large, plain, red-brown olla. Oriented north-south, with head to south, it had prob-

ably been interred in a flexed position and textile-wrapped. No artifacts were in association.

Deeper in the sand, at 3.25-3.50 meters below surface, Burial 4, an infant, was located extending under the south wall of the pit near the southeast corner. The bones were in the lower half, or side, of a large White-on-

red flattened globular bowl. The other half of the bowl formed a cover. A second White-on-red style bowl had been placed with the burial.

No sherds, burials, or any other evidences of human occupation were discovered below 3.50 meters deep, and the excavation was terminated.

The Pottery from Cerro de Trinidad, Site E

THE POTTERY from Site E is easily divided into two major styles, the Chancay White-on-red and the Interlocking. These were terms used by Kroeber to describe two lots of specimens obtained by Uhle from the site (Kroeber, 1926b). These lots, according to Uhle, represented a "first" and a "second" period (Kroeber, 1926b, p. 275). The salient features of the vessels which Uhle had segregated into his "first," or E₁, period (Interlocking) were the use of three colors (red, white, black), the interlocking fish pattern and its variations, and cylindrical bowl forms. The "second," or E₂ period (White-on-red), was characterized by crude, simple designs of white on a red-slipped background, and jar and bowl forms differing from those of the E₁ period. These standards, however, were not consistent for all pottery from each of the periods. In the E₂ period Uhle listed specimens of three colors (Kroeber, 1926b, p. 278), and there were a number of vessels designated as E₁ which did not show the interlocking fish motif in any of its variations (Kroeber, 1926b). In other words, style did not conform completely to period. Lacking grave association for the specimens, Kroeber proceeded on the basis of the E₁ and E₂ classification of Uhle. To quote Kroeber (1926b, p. 276):

Plausible as Dr. Uhle's interpretation of the situation at site E is, it is accordingly a subjective one. However, the objective facts as to association of specimens in the ground and within separate burials not having been obtainable or being no longer available, the collection will be examined as divided by Dr. Uhle into lots E₁ and E₂. These two designations therefore do not . . . refer to graves; nor are they employed with unreserved acceptance of Dr. Uhle's view as to the lots being temporally distinct. They are used as enforced groupings which

obviously conform in the main to a real distinction of some sort within the site E ware.

The present use of the concepts of these two styles differs in some degree from that previously employed. The Chancay White-on-red style has been made to include only that pottery showing the White-on-red decoration or other closely related types of vessel ornamentation and surface treatment. The Interlocking style has been restricted to include only those vessels and sherds which are decorated with some form of the interlocking fish or commonly allied design motifs and elements. Each style has been subdivided into types based upon surface treatment or decoration. Outside of the range of these two styles, other types and styles have been designated. Some of these, as the types Coarse plain red and Smooth plain red, are related in form and quality of ware to the two major styles. Both of these types are numerically important in the sherd counts. Other types, such as a Negative painted ware, Polished black ware, and Late Chancay Black-on-white, bear no close relationship to the White-on-red or Interlocking. The first two are quantitatively trivial and probably represent trade influences. Chancay Black-on-white ware is clearly later in time.

In describing the pottery, whole and restorable vessels from graves or other *in situ* proveniences are treated separately from the sherds, although the same classification applies to both. In some of the types a much greater range of decoration and rim form is observed in the sherd material. Also, the numerical strength of a type arrived at by a sherd count may vary greatly from that derived from a count of whole specimens. This may be explained, first, by the relatively few graves ex-

cavated and, second, by the fact that a pot of the type White-decorated, for instance, could shatter down into rubbish sherds which would be classified under more than one type. Plain fragments would be considered as Smooth plain red, white bottom pieces as White-slipped, and only the area of decoration itself, which is relatively small, as White-decorated. There is no satisfactory way to

obviate this difficulty. The fineness of the typological breakdown is not a descriptive exercise but a means to facilitate stratigraphic studies. The type is completely illustrated only by the vessels which are aggregates of modes (Rouse, 1939) in decoration and pottery construction. The study, stratigraphically, of sherds is actually a tabulation, per level, of modes rather than of whole types.

THE WHITE-ON-RED STYLE

There are 38 complete or partially restorable White-on-red vessels from Cerro de Trinidad, Site E, in this collection. These divide into five main decoration types. The vessels of this style have been classified according to vessel form following Kroeber's original shape classification (Kroeber, 1926b, p. 277). The decoration types do not correspond exactly with the form classification, although there are some partial correlations. The ware of the White-on-red style is hard and fired a dull red. The walls are medium in thickness, ranging from 4 to 7 millimeters, with an average closer to the lower figure. With few exceptions, there is little variation in thickness among rim, side, and bottom areas. No evidence of differential firing is observed in paste cross section. The paste is fairly even and sandy, and coarser particles of grit have been added as a temper. The exterior surfaces are smooth but not polished. They are red-slipped, and the red varies from a bright orange-red to a fire-clouded brown or black.

The form classification for the style is given as follows (see Fig. 4):

I. Bowls		15
A. Lipless		
1. Low, flaring	2	
2. Low, incurved or vertical-walled	0	
3. Low, incurved, 2 handles	0	
B. With lip		
1. Incurved	1	
2. Incurved, 2 handles	12	
II. Jars		21
A. Broad mouth		
1. No definite neck	0	
2. Two to four bulges	0	
B. Vertical or flaring neck		
1. Vertical or flaring neck, no handles	6	

2. Vertical or flaring neck, 2 handles or knobs	1
3. Vertical neck, 1 flat or round handle on neck	0
C. Mammiform	
1. Small	8
2. Large	6
D. Cylindrical, with or without rim of knobs	0
E. Small mouth, large knobs or handles	0
F. Double spout	0
G. Bird	0
III. Eccentric forms	2
TOTAL VESSELS	38

Although the complete form classification of the Uhle E1 collection is not necessary for the present material, it has been given for comparison. Two small modifications have been made: II C, "Mammiform jar," has been subdivided into "Large" (Fig. 4d, 4e) and "Small" (Fig. 4b); and III, "Eccentric forms," has been added for the recent collection. Summations of the vessel forms for each decoration type are listed under the following type discussions.

TYPE: WHITE-DECORATED

Vessels.—The ten vessel specimens of the White-decorated type may be summarized under the following forms:

I A 1. Bowl, lipless, low flaring	1
I B 1. Bowl, with lip, incurved	1
I B 2. Bowl, with lip, incurved, 2 handles	4
II B 1. Jar, vertical or flaring neck, no handles	1
II C 1. Mammiform jar, small	2
III. Eccentric form	1

This is the marker type for the White-on-red style as it is found in the Chancay valley. It is easy to recognize even in small sherds. Design units such as dots, triangles, lines or

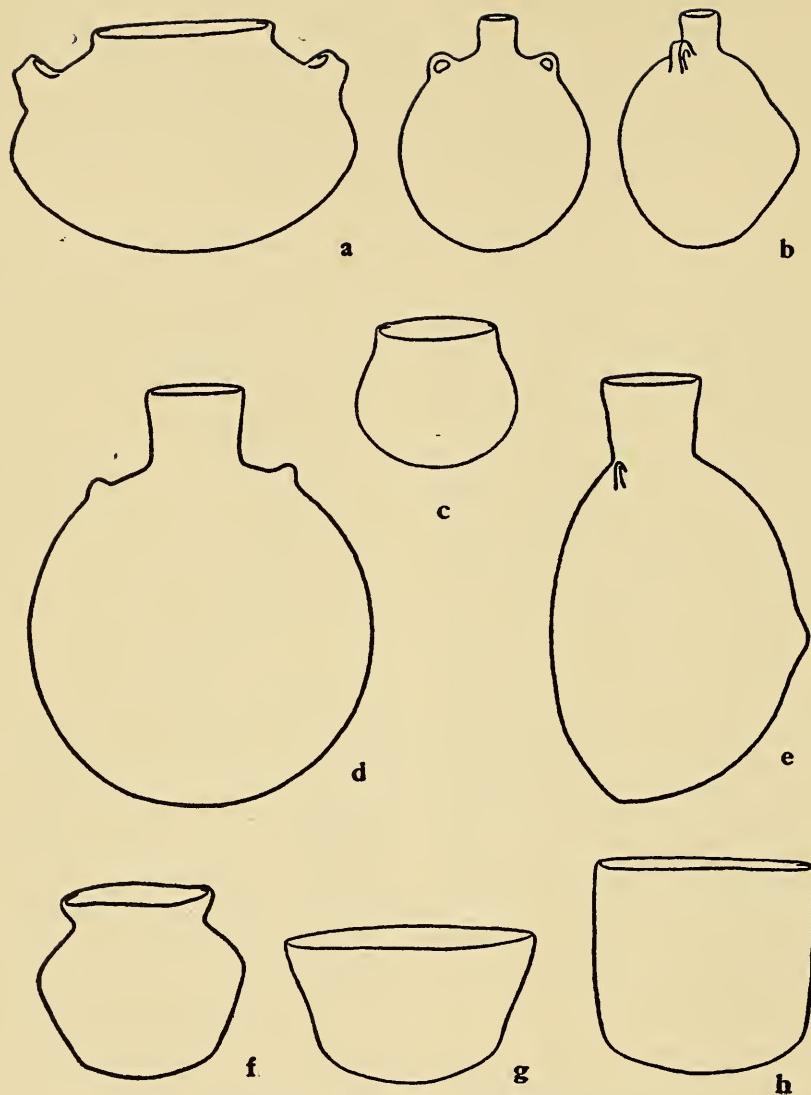


FIG. 4. COMMON VESSEL FORMS FROM SITE E

a, incurved bowl with two horizontal strap handles; b, small mammiform jar; c, small jar with vertical neck; d and e, large mammiform jar; f, small jar with flaring neck; g, bowl with out-slanting sides; h, beaker bowl. a-g are essentially White-on-red forms; h is an Interlocking form. Size: a, b, f, h, $\frac{1}{6}$ natural size; d, e, $\frac{1}{10}$ natural size; g, $\frac{1}{4}$ natural size

thin bands, diamond forms, and circles are crudely executed. Combinations of nested triangles filled with dots, crisscrossed lines forming a series of diamonds, and fields of dots are frequent. An occasional meandering-line border is noted. Most of the bowls of this type have a marked median ridge running horizontally around the vessel and marking the maximum diameter of the vessel. The line and dot decoration is placed on the upper side between the vessel mouth and the median ridge (Plates 1b, 1d, 1e, 2f, 2i). The custom of painting half of the vessel white and leaving the other half red is common in both the White-decorated and White-zoned types. The incurved bowls of the White-decorated type sometimes have the lower half below the median ridge slipped white. Broad white bands often extend from the median ridge to the rim in the vicinity of the handles. Handles are of the strap type and always horizontal to the plane of the vessel mouth. The small mammiform jars of the White-decorated type (Plates 1a, 2b) are divided vertically with the more protuberant side of the jar white. White dot decoration appears on the opposite side. The one "eccentric form" (Plate 1f) of this type follows the tradition in having the lower half of a lobate or zeppelin-shaped body painted white. The upper or red surface is dotted in white.

Two incurved bowls (Plate 1b, 1d), a jar (Plate 2c), and a flaring bowl (Plate 2d) are completely red except for the white decorations. An incurved bowl, without handles, which is one of these three, verges upon the jar form and proportions. Actually its diameter of 17 centimeters slightly exceeds its height. A flaring bowl is a darker red than the other specimens in the White-decorated type or in the White-on-red style. This color difference appears to be in the nature of the slip rather than in the firing. The bowl is maroon, and the decoration of the exterior border, which is a series of joined diamonds each enclosing a circle, is of an orange rather than a white cast. There are no other vessels of this color, although a few sherds resembling this ware and decoration were found.

Sherds.—Nearly all of the sherds of this type display the same ware qualities as the

complete vessels. Only a few coarse, heavy ware fragments with white decoration obtained. A number of new forms, however, are indicated. These include a bowl with incurved walls and a low flaring collar rather than a lip (Fig. 5o) and a very shallow bowl or plate with an upturned lip or edge (Fig. 5a).

The following are variations in the White-decorated type. Most of these were not found on the complete vessels.

1. Single or double rows of circles around the rims of bowls and jars (Plate 3a, 3c)
2. Fields of white dots (common also on complete vessels) (Plate 3g)
3. Inscribed rectangles (Plate 3p, 3q)
4. Crosshatching (Plate 3l, 3m)
5. Bands of alternating horizontal and vertical lines (Plate 3i, 3j)
6. Volutes or inscribed semicircles extending down from the rim (Plate 3r, 3s)
7. Groups of vertical lines extending down from the rim (Plate 3n, 3o)
8. Nested triangles filled with dots (common on the complete vessels; not common on sherds) (Plate 3f)
9. Opposed diagonal lines extending down from the rim (Plate 3k)
10. Band of broken horizontal lines or "dashes" around rim (Plate 3h)
11. Combination of rectilinear volutes or serried diamonds with circles (found almost exclusively on maroon ware decorated with light orange)
12. Combination of inscribed triangles, rectangles, and circles (the few coarse ware sherds were of this type) (Plate 3d, 3e)
13. Miscellaneous designs (Plate 3t, 3u)

TYPE: RED-ON-WHITE

Vessels.—The four vessels of the Red-on-white type may be summarized under the following forms:

I A 1. Bowl, lipless, low, flaring	1
II B 1. Jar, vertical or flaring neck, no handles	2
II B 2. Jar, vertical or flaring neck, 2 handles or knobs	1

This is a minority type which is related in decoration and ware to the previous White-decorated type. Over the original red-fired

surface a white slip was applied on either the exterior or the interior surface or on both surfaces. Dot or line designs in red are applied on a white background. A jar with a flaring neck (Plate 4b) and a low flaring bowl (Plate 4d) have an exterior white slip as a ground for dark red dots. A second jar has a white-slipped interior, and the red design is composed of several groups of crudely drawn lines extending down from the lip for a few centimeters on the interior. A jar with two nub handles (Plate 4a) is very carelessly divided, with the upper half or two-thirds of the vessel white, the other portion red. Simple lines and cross-hachure below the rim, on the white exterior surface, are done in red.

Sherds.—There are sherds of both fine (Plate 3v, 3w) and coarse (Plate 3x) ware. Rim sherds of small straight-necked jars are in both groups. The shallow bowl and plate forms both occur in the fine ware. One coarse sherd is undoubtedly a part of the mammiform bulge of a large jar. Decoration is limited to red dots and stripes on the white background.

**TYPE: COMBINATION WHITE AND RED
DECORATED**

Vessels.—The vessel of this type may be classified according to form as:

I B 2, bowl, with lip, incurved, 2 handles 1

This specimen is a large incurved bowl (Plate 1c). Below the median ridge it is white-slipped. Above the ridge the red field is decorated with carelessly arranged rows of large white dots. White semicircular zones extend above the ridge to enclose the handles on each side of the bowl. Dark red dots are placed on these zones. Similar red dots are on the interior of the vessel lip, which is painted white.

TYPE: WHITE-ZONED (FINE WARE)

Vessels.—The nineteen vessels of the White-zoned (fine ware) type may be summarized under the following forms:

I B 2. Bowl, with lip, incurved, 2 handles	5
II B 1. Jar, vertical or flaring neck, no handles	3
II C 1. Mammiform jar, small	6
II C 2. Mammiform jar, large	4
II. [Fragmentary small jar]	1

This type, numerically the greatest, includes all vessels whose only surface decoration is white slipping of large zones, such as the bottom, or painting of very wide, bold, white bands over the red-slipped ground. The incurved bowls which belong to this type have the bottom below the median ridge white-slipped and usually are further marked by white zones extending from the ridge to the mouth in the region of the handles (Plate 1g). As has been pointed out, both these types of zoning also occur on incurved bowls which are typed as White-decorated because of the added line and dot ornamentation. Other forms of zoning include white slipping of the upper portion of the vessel rather than the lower (Plate 2a), both horizontal (Plate 1h, 1i) and vertical (Plate 2h) division of small mammiform jars into red and white areas, alternating white and red vertical bands (Plate 1j) running the complete height of the vessel, bands encircling the vessel immediately below the rim (Plate 2e), and very carelessly applied large irregular bands on the body.

The small mammiform jar, a form peculiar to the White-on-red style, is common in this White-zoned type. They are quite uniform in size, varying from 18 to 20 centimeters in height, 15.5 to 17 centimeters in maximum width, and 12 to 13 centimeters across the smaller width. They have small, straight spouts, and two small strap handles are placed equidistant from the spout. In some instances nubs are used in place of handles. One side of the jar is relatively flat; the other protrudes and is often painted white. The protuberance is formed by placing a single circular and conical pat of clay in the wall of the jar as a final step in the construction. This is true of the large as well as the small mammiform jars.

The four large mammiform jars of this decoration type were all found in a very fragmentary condition (Plate 4e). They range from 50 to 50 centimeters in height and are almost as broad as high. They all have rather small mouths (10 centimeters in diameter) and short straight necks. The white paint is applied in irregular zones running more or less vertically from neck to base. The mammiform protuberance is small and bluntly conical, measuring

about 12 centimeters across. It is located on the center of one side of the body.

Sherds.—The sherds of this type conform closely to the complete vessels. The incurved, lipped bowl with broad vertical white bands on the sides is represented by numerous rim pieces (Plate 3yy). The same is true of large, straight-necked jars (probably mammiform) (Plate 3z). One small spout with an everted lip is in the collection.

TYPE: WHITE-ZONED (COARSE WARE)

Sherds.—No complete vessels of this type were recovered, but the broken ollas used as burial covers from Pits IV and VII are fragmentary examples. Size in some cases is as much as one meter in diameter and height. These huge vessels are globular or flattened globular in shape, with short flaring collars. Among the other vessels are smaller incurved bowls with short collars, large jars (perhaps mammiform) with small straight necks, and small straight-necked jars. Vessel walls average over one centimeter in thickness, and the paste is coarse and tempered with large particles of grit. Exteriors are fairly well smoothed and are red-slipped.

The white decoration is applied haphazardly. Large white swaths encircle the neck (Plate 3y) and upper part of the vessel, with wide vertical bands joining these and extending down the vessel sides. Vertical white zones are sometimes placed on the necks of jars (Plate 3zz).

TYPE: WHITE-SLIPPED (FINE WARE)

Vessels.—The three vessels of this type may be summarized under the following forms:

I B 2. Bowl, with lip, incurved, 2 handles	2
II C 2. Mammiform jar, large	1

This type is completely slipped on the exterior surface with a white paint. The white is the same chalky dead white that is observed throughout the White-on-red style. The incurved bowl forms (Plate 4c) with two horizontally placed strap handles are the same as those of the White-decorated and White-zoned types. The large mammiform jar is over 50 centimeters high and 40 and 30 centimeters broad and has two very small, apparently non-

functional, nubs, one on either side of the neck (Plate 4f).

Sherds.—Among the sherds, the most common form is the shallow bowl or plate. These are white-slipped on the bottom and red-slipped on the interior (Plate 5Aj). There are two principal variations in the rims of the plate form. One is the upturned rim which leaves a definite angle on the outside of the vessel (Fig. 5a). The other is more gently upcurved, and on the interior there is a thickening or bulge on the lip (Fig. 5b). Shallow open bowls (Fig. 5h), bottle forms, short-necked jars (Fig. 5c), and incurved bowls with low collars (Fig. 5 o) also occur in this type. One fragment of a hollow stirrup-spout is shown on Plate 5Ai.

TYPE: WHITE-SLIPPED (COARSE WARE)

Vessels.—There is only one restorable or partially restorable vessel of this type; it is classified as:

III. Eccentric form

1

The eccentric form is a restored fragment of an obviously larger vessel (Plate 2g). It is 27 centimeters high and about 13 centimeters in diameter. What is now an orifice appears to have been a connection with a larger vessel. The opposite end comes to a point at which four prominent ridges converge. It seems to be a plant effigy, perhaps a cactus.

Sherds.—The sherds show this to be a coarse ware very similar to that of the White-zoned (coarse ware) type. It averages well over one centimeter in thickness. Extremes of 2.5 centimeters are noted. The white paint is used as an exterior slip. Some sherds appear to have been first red-slipped, but most of them have only a thin white wash over the original surface. This latter flakes off easily to expose the coarse, brick-red, heavily tempered paste. Three main vessel forms are recorded: a bowl with incurved sides, a jar with a short neck (Fig. 5r), and a big open bowl with outcurving sides (Fig. 5q).

Of the first, the bowl or olla with incurved sides, there are a number of rim or neck variations. A few rim sherds show no lip or neck. Most common is a short, straight collar (Plate 5Aa). Others are short but outflared (Plate



FIG. 5. RIM PROFILES FROM SITE E

Interiors to right. a, c, m, o, White-decorated; b, h, i, n, p, Smooth plain red; d, e, g, j, k, l, Interlocking type; f, Circle type; q, r, Coarse Plain red. (These same forms are also found in connection with other decoration or surface finish types as explained in text.) Size: $\frac{1}{2}$ natural size

5Ab). Some are very high and straight or very slightly outslanted. Strap handles are a feature of some of the bowls. The short necks on the jars are either straight or very slightly everted at the top. The big bowls are characterized by a heavy thickening of the rim (Fig. 5q).

In this type, a number of curious ridged sherds similar to the restored part of the vessel

described above occur. The ridges run longitudinally on long, lobate forms (Plate 5Ae). Sometimes the ridges are notched along the edges (Plate 5Ad). In other instances they are indented with deep cuplike depressions (Plate 5Ac). Besides the ridges, some vessels have round knoblike additions similarly indented (Plate 5Ah).

THE INTERLOCKING STYLE

The Interlocking style is defined by the use of a conventionalized, textile-derived, interlocking fish design. Types within the style are denoted by rectilinear and curvilinear rendering of the design and by a number of minor elements such as circles, fields of dots, and X marks which are sometimes used in conjunction with the fish motif. The decoration is in black and white, or black, white, and bright red, on a red-slipped ground. An interlocking fish fret is frequently used as a border decoration below the rim.

TYPE: INTERLOCKING

Vessels.—The Interlocking type proper is concerned with all of the rectilinear variations of the interlocking fish pattern used as vessel body decoration. Inscribed triangle on chevron designs ("reduced faces") are also included in the type. As defined, it includes most of Kroeber's "a" division of the Interlocking style, omitting elements like rows of dots or circles (Kroeber, 1926b, pp. 279-81). The five restored vessels of the Interlocking type may be subsumed as follows, according to form:

Large beakers, straight or outslanting sides	3
Large beakers, slightly outflared sides	1
Mammiform jar, large	1

These beakers average 20 centimeters in height and about the same in maximum diameter, which is at or near the orifice (Fig. 4h). One of the straight-sided beakers (Plate 6c) and the beaker with the slight outflare (Plate 6a) have only the interlocking fish fret design as a border, with the rest of the vessel left plain. The other two straight-sided beakers have a highly simplified fret border and chevron or inscribed triangular designs covering the exterior walls (Plate 6b, 6d).

The large mammiform jar (Plate 6g), conforms closely in shape to those of the White-on-red style. This one is almost 50 centimeters high and 40 centimeters in maximum width. The neck is straight, but there is a small flared or everted lip. There are no handles or nubs on the jar. Construction and form are better and more carefully done than in the White-on-red style. The jar is almost flat on one side and fully rounded on the other, and a definite angle or ridge marks the juncture of the flat and rounded sides. The protuberance is in the center of the rounded side, and has been formed by a single round piece of clay. The decoration is contained in a broad band running around the upper half of the jar. The neck, however, is left plain. The design is, typically, laid out in black with bright red for a filler between the black lines. White is used to outline the black. The heads of the fish, large and triangular, with bifurcated apices for mouths and smaller triangles or rectangles for eyes, are interlocked in a complicated design.

Sherds.—Nearly all of the sherds of the Interlocking type conform in ware quality to the restored vessels just discussed. The range in thickness, with a few exceptions, is from 3 to 7 millimeters. The exceptions are sherds of a coarse ware, tempered with heavy grit and very similar to the other coarse wares described from the site. The thickness of these sherds averages 1.5 centimeters.

A great variety of decoration is represented in the sherd collection, but it is all allied to the interlocking fish motif. Decoration is applied to either the exterior or the interior of vessels, and some low bowls and plates have been decorated on both surfaces. The use of the interlocking fish fret in one form or an-

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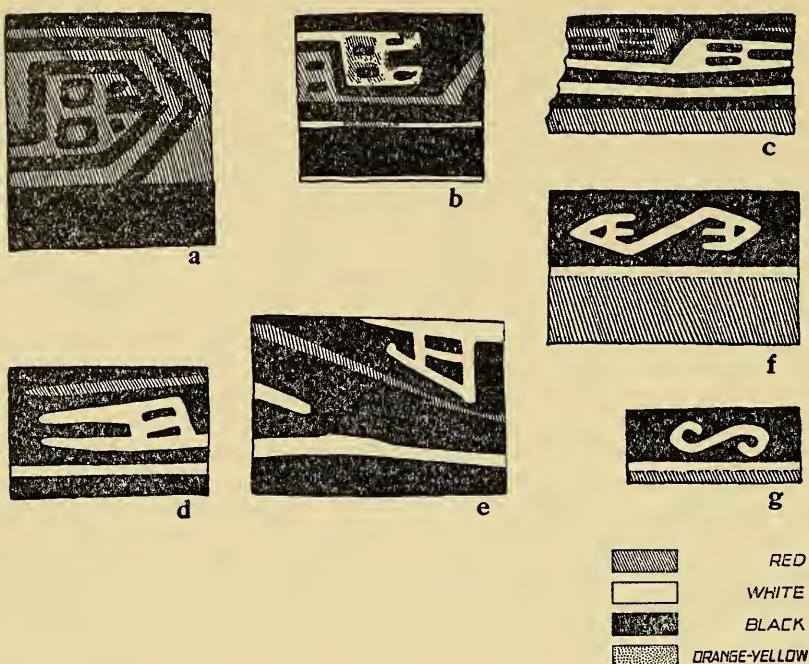


FIG. 6. BORDER DESIGNS FROM INTERLOCKING STYLE VESSELS

a-f, variations of the interlocking fish fret; a, b, c, d, f, from vessel exteriors; e, from interior of a shallow bowl; g, a sigmoid design used as a border

other is almost universal. Variations in this border are shown on Figure 6 and Plate 6h-l.

Body decoration may be analyzed as follows:

1. Bifurcated triangles or fishheads (Plate 7c, 7f-i)
2. Simple triangular fishheads interlocked (Plate 7e, 7j, 7p)
3. Serrations and enclosed dots (Plate 7k, 7l, 7m)
4. Rhomboid fishheads
5. Nested triangles or chevrons ("reduced faces?") (Plate 7n, 7q)⁵
6. Crosshatching (Plate 7s)
7. Parallel lines of alternating colors
8. Step designs
9. Crossbar design (Plate 7t, 7u)

The first three design units are the most common, although there are many differences in their manner of execution. Number 3 is

often used in conjunction with Numbers 1, 2, or 4. Numbers 6 to 9 are relatively rare. Number 5 often represents a fishhead with the triangle divided by lines or enclosing dots.

Vessel forms can be listed after an examination of sherds of the Interlocking type.

1. Low bowl, slightly incurved sides, no lip (Fig. 5n)
2. Plate with gradually upcurved rim (Fig. 5g)
3. Large mammiform jar with neck (Plate 7r)
4. Large olla (a globular bowl or jar) with straight or flared neck (Fig. 5d, 5j)
5. Beaker bowl (Fig. 4h)
6. Beaker bowl or deep bowl with a thickened rim; rims often inturned (Fig. 5e, 5f, 5l)
7. Small jar with straight or slightly out-flared neck
8. Small jar with bulbous or swollen neck (Fig. 5k)

⁵ The simplest of these were later reclassified as Three-color "Intermediate."

TYPE: THREE-COLOR CURVILINEAR AND NATURALISTIC⁶

Sherds.—Four fifths of the sherds of this type are red-slipped and decorated with broad, sweeping, curvilinear bands of black outlined with white (Plate 8A1). When white bordering lines are not used, small white spots or bars dot the black bands at close intervals. None of the sherds gives the complete pattern of the design, which is apparently large and boldly executed. One element, besides the common ones described, is a black circle filled with white from which black bands radiate in four directions (Plate 8An). A finer, more carefully done design is rectilinear and relatively naturalistic. It is the fish design standing free, and not the typical highly stylized fish conception (Plate 8Am). In only one instance is the interlocking fish fret used as a border.

Rim sherds are too few to permit discussion of vessel form.

TYPE: DOT⁷

Sherds.—This variant type of the Interlocking style is characterized by the use of small painted dots. These occur in all three colors, red, white, and black. They are used as fillers (Plate 8Ab, 8Ae-g) for line and band designs and also to form the entire design. In nearly every instance where the sherd considered is a rim piece the interlocking fish fret is used as a border below the rim. Dots are commonly associated with inscribed triangle or chevron motifs where they are used as a filler between the bands of the design. Some of these are clearly parts of the interlocking fish pattern (Plate 8Ac). On some sherds, areas of white or black dots on a red ground compose the fish designs (Plate 8Aa).

Beaker bowls, shallow open bowls, and an

occasional bowl with incurved walls, with or without a neck, are the forms noted.

TYPE: CIRCLE⁸

Sherds.—Small painted circles used as body decoration on three-color pottery denote this type. The circles, which average 9 millimeters in diameter, are usually white, red, or orange on a dark-red to blackish background. They are arranged in fields or rows on the body of the vessel and are often interspersed with small red or white dots (Plate 8Ah, 8Ai). Interlocking style affinities are clearly implied by the use of the interlocking fish fret border. On three sherds, the circle decoration on the body is combined with a row of horizontally placed sigmoid figures running around the border. These are the only occurrences of the sigmoid unit on types related to the Interlocking style. One sherd has red and black circles and white dots on an orange field (Plate 8Ad). The polished surface and decorative arrangement of this fragment suggests the Early Lima ware of the Rimac valley.

Variations of the beaker bowl rim are the only indications of vessel form among the sherds of this type.

TYPE: X-MARK

Sherds.—There are less than a dozen sherds of the X-mark Type. The motif is a border of X marks running around the top of the vessel. All of the sherds are rim pieces, and it seems certain that the design arrangement is a rim border only. Three colors are used in decoration. As a rule, white X marks occur on a red or black background (Plate 8Aj, 8Ak). Once black X marks appear on a red ground.

Rim profiles suggest low bowls with slightly incurved sides as the usual form associated with the design.

THREE-COLOR "INTERMEDIATE"

Vessels.—Two vessels of black and white on red are so different from those of the Interlocking

⁶ This type conforms closely to Kroeber's "b" division of the Interlocking. See Kroeber, 1926b, pp. 281-82.

⁷ This type designates a part of the elements included under Kroeber's "a" division of the Interlocking. See Kroeber 1926b, p. 281.

style that they are considered separately. In form and simplicity of design they resemble the White-on-red style; in use of three colors they are more like Interlocking. Their grave

⁸ See also division "a," Interlocking style. Kroeber, 1926b, p. 281.

and stratigraphic associations strengthen this position of intermediacy.

Both specimens are low bowls with incurved walls. Both are without lips and handles. The larger (Plate 6e), which is 22 centimeters in diameter and 11 centimeters high, has the pronounced median ridge at the point of maximum diameter, a feature characteristic of White-on-red bowls. The rim, in profile, is thinned and pointed. The interior is unslipped. The exterior has a pale orange slip which has been fire clouded. The surface has been well smoothed on the outside, and the ware is identical with that of the White-on-red or Interlocking style. Decoration, which covers the full area between median ridge and mouth, is a series of white rectangles or panels. Each of these is separated by four vertical black lines and a row of black dots between the two middle lines. A single black line runs around the median ridge and connects with the vertical black lines.

The second bowl has been badly damaged by fire, but it is clearly of the same type (Plate 6f). It measures only 10 centimeters in diameter and 5 centimeters in height. The design on the upper half is similar to that of the

larger vessel, although nested triangles, or "reduced faces," of black and white are used instead of rectangles and vertical lines. There is a black dot in each triangle. It is, perhaps, closer to the Interlocking type than the other.

Sherds.—In the original scheme, possible sherds of Three-color "Intermediate" type were not classified separately but were counted with the Interlocking type. When the probable significance of the type was recognized, all of the Interlocking type sherds were re-examined to sort out "Intermediate" pieces. Nine sherds were found which seem to fit into this classification (Plate 7o). All of these resemble in simplicity of design arrangement and color the two whole vessels just described. The vessel shape, where it was possible to determine it in the sherds, was also the low, incurved bowl with an unmodified lip. There was, however, considerable difficulty experienced in trying to distinguish in many cases between Interlocking type sherds with the nested triangle or chevron design and the Three-color "Intermediate" sherds. There is little doubt but that there is a relationship, and the types grade very easily from one to the other.

PLAIN RED WARES

In sherd count, the Plain red wares make up the greater part of the material from the stratigraphic cuts. There are, however, few whole vessels in Plain red. The ones found with burials are all small pieces. It is likely that the huge Plain red ollas were never placed with the dead. Plain red has been divided into two types, both of which relate to the White-on-red and Interlocking styles. This is clear from vessel forms, rim forms, paste and ware characteristics, and association. These two types, Smooth plain red and Coarse plain red, follow similar divisions in the White-slipped and White-zoned types of the White-on-red style. Smooth plain red is medium-thin well-fired pottery which has a great deal of variation in color, ranging from orange to mottled brown. In small vessels it is no thicker than the White-on-red painted types; in extremely large ollas or jars the walls and bases average a few millimeters more. Coarse plain red, for sherd

classification, includes thick slipped and unslipped pottery which was not well smoothed and is coarse in paste and surface texture. It is red-fired and has heavy coarse temper, particles of grit which extrude through onto the smoothed surfaces. Walls are between .8 and 1.5 centimeters thick. As in the case of Smooth plain red, it is similar to the White-slipped (coarse) or the White-zoned (coarse) type of the White-on-red style.

TYPE: SMOOTH PLAIN RED

Vessels.—The six smooth plain red vessels may be classified according to form as follows:

I A 1. Bowl, lipless, low, flaring (miniature)	3
I A 2. Bowl, lipless, incurved or vertical walls	1
I A 3. Bowl, lipless, low, incurved, 2 handles	1
II B 3. Jar, vertical neck, 1 round handle on neck	1

The three small miniature bowls are very similar (Plate 4j). All have been slipped and smoothed both inside and out. They average

9 centimeters in diameter at the orifice and 4.5 centimeters in height. Both lipless, incurved, low bowls are the same size: 13 centimeters in diameter and 8.5 centimeters in height. The one with handles is unique for the collection (Plate 4h). It has a ridge or bevel encircling the bowl just below the lip. Projecting from this on opposite sides are two triangular, slightly upturned lugs. These have been pierced, vertically to the vessel, with small holes, perhaps for suspension. The vessel with the handle on the neck is a small jar or "pitcher" (Plate 4i), 14 centimeters high. The mouth is 3.5 centimeters in diameter. The handle extends to the lip from the body and is round and not straplike. The base is round.

Sherds.—Because of the overwhelming number of sherds of the Smooth plain red type recovered from the site, it is possible to describe a very representative range of forms from the sherds. It will be noted that a number of these forms have been described for other types, particularly the White-on-red style. Numerically, the two most prominent forms are the plate with upturned or thickened rim and the incurved bowl with a folded or turned-up lip. For brevity in description, these and other forms, and their variations, are listed below.

1. Plate with upturned rim (Fig. 5a)
2. Plate with thickened rim (Fig. 5b)
3. Shallow open bowl (Fig. 5h)
4. Deep open bowl (Fig. 5p)
5. Bowl with slightly incurved sides (Fig. 5n)
6. Bowl with incurved sides (flattened globular), no lip (Fig. 5i)
7. Bowl with incurved sides (flattened globular), lipped (Fig. 5m; Plate 5Al)
8. Jar with straight inslanting sides
9. Jar with bulbous neck (Fig. 5k)
10. Jar with flared neck
11. Jar with small bottleneck
12. Large jar with high neck or collar (Plate 5Ak)

Bases are usually rounded, but a circular flat base does occur. Horizontally placed strap handles and rounded nubs are common features. Modeled ridges on vessels and small pointed spouts are interesting but uncommon items.

TYPE: COARSE PLAIN RED

Vessels.—The three vessels of this type can be summarized according to shape as follows:

II B 3. Jar, vertical neck, 1 round handle

(miniature) 1

Huge ollas with handles 2

The miniature jar or "pitcher" (Plate 4k) is very carelessly made and may have been a toy. It is 8 centimeters high, with a round base and a round handle connecting lip and body.

Two huge olla forms were not found with burials but as sherds of vessels broken *in situ*. Both of these have large, flattened globular bodies and short necks. The larger, though fragmentary, can be estimated at 60 centimeters in diameter, with an orifice of 18 centimeters. This one has an outflaring neck which tapers into a pointed lip. The strap handles, which are horizontally placed, are 20 centimeters long and over 8 centimeters wide. The other olla is a little smaller and has a short, straight neck. Its handles are relatively small, comparable to those of ordinary-sized vessels, and are placed about 10 centimeters below the mouth.

Sherds.—The rim sherds of this type show generic shape resemblance to the form of the Smooth plain red but, as would be expected, there is a heavy crudeness about rim and lip treatment. The incurved bowl with a lip is one of the most usual forms, but more often the lip is a thick straight collar or neck, 1.5 to 2 centimeters high (Fig. 5r). Huge olla forms, which are essentially the same as the smaller incurved bowls in body outline, have high straight necks or flaring necks. Some of these have a thickening on the lip exterior. There is also a big jar form with a straight neck comparable to a similar form in the Smooth plain red. Small jars with straight or outflared necks and deep open bowls (Fig. 5q) are less common.

A number of ornamental features are like those of the White-slipped (coarse) type. The same ridges and knobs with indentations are applied to the vessel surface. Besides both massive and small strap handles, there are small nub projections, undecorated, which may be functional.

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MISCELLANEOUS DECORATED

Sherds.—Most of the sherds of this category are those pieces which were too fragmentary or too eroded to classify under any of the listed styles or types. It is likely that the majority are of the Interlocking style. Some may be White-on-red.

Those few sherds that stand out from this group deserve separate discussion. One is a three-color rim sherd from a bowl with very slightly incurved walls and a tapering and pointed lip. The decoration is a border band of white outlined in black. Set in the band are black red-filled rectangles connected to the top black band of the border (Fig. 7a). Two of these rectangles have small black dots in the center. This sherd came from Pit VI, Level 5 (1.25–1.50 meters), an Interlocking period

level. Another rim sherd from a very similar bowl shape has a white paint design on a red surface. This consists of an interlocking fish fret border, done entirely in white, and what may be a rectilinear and naturalistic white design on the body of the bowl (Fig. 7e). There is no black paint whatsoever. It was the only sherd of this variation found at the site. Provenience is Pit V, Level 1 (0–.50 meter). A third piece, also a rim sherd from a bowl of the same general shape as the other two, has a white-slipped interior and an orange-slipped exterior. The design on the exterior is a cat of the Recuay genre done in deep, purplish black (Plate 8Bo). It came from Pit VI, Level 1, 0–.50 meter deep.

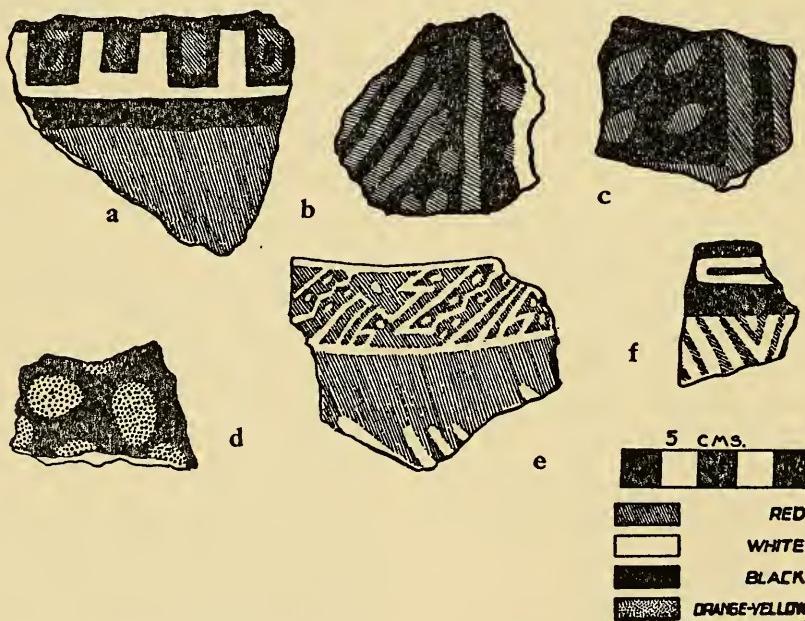


FIG. 7. VARIOUS DECORATED TYPES FROM SITE E AND FROM BAÑOS DE BOZA

a, miscellaneous panel design from Site E; b, c, Negative painted sherds from Site E; d, Negative painted sherd from Baños de Boza; e, Interlocking style design in White-on-red painting from Site E; f, the only Interlocking sherd from Baños de Boza. Size: $\frac{1}{2}$ natural size

INCISED AND PUNCTATED

Sherds.—Few of the incised or punctated sherds recovered from Site E are large enough or distinct enough to give an adequate pattern of the design. There are three fragments, two from mixed Interlocking and White-on-red levels and one from a deep, pure White-on-red level (Plate 8Bu, 8Bv), that are indeterminate bits of animal or human effigies. All three show enough painted surface to suggest relationship to the White-on-red style. The one from the deep level has long, triangular punctate marks. One of the others has a single hollow-reed with enclosed dot impression, and the last shows a zigzag line of incision.

Five sherds are decorated with rows or fields of circular hollow-reed punctations. The circular punctations vary from 4 to 8 millimeters

in diameter. On two rim sherds they have been placed in rows around the base of a short vessel collar (Plate 8Bs, 8Bt). All of these punctated sherds came from the Interlocking or Intermediate levels.

Two other sherds have combination small-dot or jabbed punctations and hollow-reed punctations. One of these is a short spout with a flared lip. The decoration is on a bulge or swelling around the base of the spout. Both sherds are from Interlocking period levels.

Two small sherds, one with fingernail (?) punctations and the other with incised lines, are also from upper levels. One tiny sherd from a deep White-on-red level has a depressed area or band of little dot punctations bordered by a narrow incised line.

NEGATIVE PAINTED STYLE

Sherds.—Six sherds of the Negative painted style came from Site E. The ware is red-fired, is tempered with medium-fine sand and grit, and, judging from the few sherds at hand, averages 6 millimeters in thickness. The original slip, on the exterior, is a light red. A very dark red paint or slip has been applied secondarily, leaving the decoration in light red. Decorative elements are tear-shaped dots,

round dots, and bars. Bars and dots occur together on two pieces (Fig. 7b, 7c). There is one spout sherd which has a single light-red stripe near the top as the only decoration. The spout, which is almost intact, measures 6.5 centimeters in length and 2.8 centimeters in basal diameter and slopes inward towards the opening. A strap handle has been broken from one side near the base.

POLISHED BLACK (OR

"BUCCHERO") WARE

Sherds.—True black ware was very scarce at Site E. A great many sherds and a few vessels were secondarily fire-blackened, but only a few sherds could be considered as smoke-blackened polished pottery. All sherds assigned to this type are black and polished on one or both surfaces. In cross section, or on the interior surface if unpolished, they are gray. Tempering is with medium to fine sand and grit. Thickness varies from 3 to 7 millimeters.

The incurved bowl with median ridge running around the vessel, a common form of the Smooth plain red and White-on-red types, is present in the black ware. More common forms are bowls with slightly incurved sides, jars with necks, open bowls with outslanted sides, and the flat plate described for the Smooth plain red and White-on-red types. There are no sherds of this type that specifically suggest the early or late black ware of the north.

LATE CHANCAY STYLE

The Late Chancay style was not numerically important at Site E. A few sherds were found in the upper .50–1.00 meter of most of the stratigraphic pits. The style and its types have

been described elsewhere from collections in the Chancay valley (Kroeber, 1926b, pp. 267–70). On the north side of the Chancay valley are two important sites of this culture. Not

more than a kilometer to the south of Site E is the large Late Chancay site of Ollada. Site A, excavated by Uhle, on the north side of the Cerro de Trinidad, yielded grave pottery only of this style.

TYPE: CHANCAY BLACK-ON-WHITE

Sherds.—The ware is medium to thin, ranging from 4 to 7 millimeters in thickness. The paste is fine or medium-coarse, depending upon the specimen. It has been tempered with sand or fine grit and is not unlike the finer ware of the White-on-red or Interlocking styles. Paste color is either a pale yellow or a dark orange-red. To judge from the small collection at Site E there does not seem to be much intergradation between these two standards. The primary color or slip is usually considered white, but it is not the dead white of the White-on-red style. The important variations are: a pale yellow, verging on a lime-green; and a buff. It is a characteristic slip, easily recognized, especially out of its present associations with Interlocking and White-on-red.

The decoration is black and is applied to the exterior. Panels filled with stylized bird figures (Plate 8By) or with step designs are a common motif; zigzag or wavy lines between

straight lines are another (Plate 8Bz). White circles with a black dot in the center often occur on a black field. Series of small rectangles or interlocking triangles (Plate 8Bw) sometimes run horizontally around the body of the vessel. The conceptions are very formalized; and the execution is competent and assured though not inspired.

The predominant vessel form indicated by the sherds is a low, small bowl with incurved sides. One fragment suggests a large jar with a constricted orifice. Small strap handles and tiny, probably mold-made, animal *adornos* are additional features.

TYPE: CHANCAY WHITE-SLIPPED

Sherds.—This type is closely related to the Black-on-white type, lacking only the black surface decoration. There are the same variations in the shades of white used for a slip. The most common form is a shallow, open bowl with a definite ring base. Sometimes a cross or a field of dots is left as a relief design within the raised ring of the base. The bowl form has the slip applied to both sides. Tall tumbler forms with outcurved sides are also recorded. Besides the strap handles, an intertwined handle, simulating a rope (Plate 8Bzz), occasionally appears.

TABLE 1
PROVENIENCE OF POTTERY ILLUSTRATED

	Pit	Location in Pit	Plate 3 (continued)		
	Plate 1, a-j, all from Pit VII, Burials 1 and 2		Pit	Location in Pit	
Plate 2			g	VII	Level 8
a	VII	Level 6, Floor F	h	IV	Level 2
b	VII	Burials 1 and 2	i	V	Level 7
c	VI	Burial 2	j	II	Level 1
d	VI	Burial 2	k	VII	Level 18
e	VI	Burial 4	l	VII	Level 15
f	VII	Burials 1 and 2	m	VII	Level 16
g	VII	Level 8	n	II	Level 3
h	VII	Burials 1 and 2	o	VI	Level 12
i	VII	Burials 1 and 2	p	VII	Levels 15 and 12
Plate 3			q	VII	Level 13
a	VII	Level 13	r	VI	Level 12
b	[Surface]		s	VI	Level 3
c	IV	Level 3	t	VII	Level 14
d	II	Level 2	u	IV	Level 5
e	V	Level 1	v	II	Level 3
f	V	Level 11	w	IV	Level 7
			x	VI	Level 10

TABLE 1 (*Continued*)
PROVENIENCE OF POTTERY ILLUSTRATED

Plate 3 (continued)			Plate 6 (continued)		
	Pit	Location in Pit		Pit	Location in Pit
y	VII	Level 6	f	VI	Burial 1
z	VII	Level 6	g	VII	on floor E
zz	VII	Level 3	h	VI	Level 1
yy	III	Level 4	i	VI	Level 1
			j	V	Level 7
Plate 4			k	VI	Level 6
a	VII	Burials 1 and 2	l	IV	Level 4
b	VII	Burials 1 and 2			
c	VII	Burials 1 and 2			
d	VII	Burials 1 and 2			
e	VI	Burial 2			
f	VI	Burial 1			
g	VII	Burials 1 and 2			
h	II	associated with child burial			
i	VII	Burials 1 and 2			
j	VII	Burials 1 and 2			
k	II	associated with child burial			
Plate 5A					
a	V	Level 11	j	IV	Level 7
b	VII	Level 18	k	VI	Level 6
c	III	Level 4	l	V	Level 1
d	IV	Level 16	m	VI	Level 1
e	VII	Level 10	n	VII	Level 8
f	II	Level 1	o	II	Level 1
g	IV	Level 5	p	IV	Level 2
h	IV	Level 9	q	IV	ext. (about 1.50 meters)
i	VII	Level 20	r	V	Level 11
j	VII	Level 12	s	VI	Level 4
k	IV	Level 6	t	VI	Level 2
l	II	Level 2	u	VII	Level 1
Plate 5B (Baños de Boza)					
m	IV	Level 9	a	VII	Level 4
n	III	Level 1	b	VI	Level 9
o	I	Level 1	c	VI	Level 3
p	IV	Level 6	d	V	Level 11
q	I	Level 1	e	VII	Level 1
r	IV	Level 2	f	II	Level 2
s	I	Level 3	g	VII	Level 4
t	I	Level 3	h	VI	Level 7
u	I	Level 4	i	II	Level 2
v	IV	Level 5	j	VII	Level 2
w	IV	Level 1	k	IV	Level 7
x	IV	Level 6	l	IV	Level 5
y	IV	Level 9	m	III	Level 2
			n		Surface
Plate 6					
a	IV	east ext., floor E			
b	IV	east ext., floor E			
c	VII	north ext., floor E			
d	VII	north ext., floor E			
e	VI	Burial 1			
Plate 8A					
Plate 8B					
o	VI	Level 1			
p	VI	Level 1			
q	VII	Level 17			
r	VII	Level 17			

POTTERY FROM CERRO DE TRINIDAD

TABLE 1 (*Continued*)
PROVENIENCE OF POTTERY ILLUSTRATED

Plate 8B (<i>continued</i>)			Figure 6 (<i>continued</i>)		
	Pit	Location in Pit		Pit	Location in Pit
s	VII	Level 1	c	IV	Level 2
t	II	Level 1	d	III	Level 3
u	IV	Level 1	e	VI	Level 6
v	IV	Level 10	f	VI	Level 5
w	IV	Level 2	g	VI	Level 2
x	VI	Level 1			
y	VI	Level 1	Figure 7		
z	VII	Level 1	a	VI	Level 5
zz	IV	Level 2	b	VII	Level 13
Figure 6			c	IV	Level 9
a	VII	Level 1	d	IV	(Baños de Boza) Level 1
b	VI	Level 9	e	V	Level 1
			f	IV	(Baños de Boza) Level 1

The Artifacts from Cerro de Trinidad, Site E

HERE IS a small but interesting collection of artifacts, other than the pottery vessels and sherds, from the refuse and burials at Site E. These are discussed below under headings based on material of manufacture or obvious function. Wherever possible, cultural affiliations, or probable affiliations, with the White-on-red, Intermediate, or Interlocking periods, as these are defined in the next section, have been given. The association of artifacts in graves containing only White-on-red pottery was, as usual, considered good evidence of identification as to cultural period. It was also possible to make period

assignments of artifacts with a good degree of accuracy in cases where stratigraphic position and typology concurred, as in the instances of certain White-on-red figurine or *adorno* fragments found in levels showing only White-on-red sherds.

Where either one of the factors of typology or significant stratigraphic provenience was lacking the degree of accuracy is lessened. Where neither factor was present, as, for example, in the case of those artifacts not distinguishable as to style and found in mixed levels, it was impossible to make any sort of judgment.

UNFIRED CLAY VESSELS

Two complete unfired clay vessels and a fragment of another were recovered from Levels 10 and 11 (2.50–3.00 meters) of Pit VII. These objects range from 9 to 10.5 centimeters in diameter and are 10 centimeters high (Fig. 8o). The walls of the vessels are 2.5 centimeters thick and taper slightly to a blunt lip. Lids or tops have been sealed over the mouths

with a black gummy substance, now dry and hard. The lids are of the same clay as the vessels. They are roughly disk-shaped, 7 centimeters in diameter and 1 centimeter in thickness. One of the vessels which was opened contained a few tiny pebbles and some straw-like vegetal particles. The provenience is in the Intermediate period rubbish zone.

PANPIPES

There are eight pieces of pottery panpipes of which two are slipped or painted. One of these is decorated in red, white, and black on both sides and suggests the Interlocking style (Fig. 8n). Its provenience is Pit IV, Level 5, 2.00–2.50 meters deep, the Intermediate period refuse zone. The fragment is only 6 centimeters long and is a corner of the instrument. Only a portion of one of the cylinders is present. The other painted fragment came from the south extension of Pit IV at a depth of approximately one meter. It is a complete cylinder with half of another conjoined. The

length is 9 centimeters, and the diameter of the complete cylinder is 1.7 centimeters. It has a brown-slipped, polished ground with a small white circle painted on one side and evidences of bright red paint on the other (Fig. 8m). The provenience is in the Interlocking period.

In Pit VI, Level 6, 1.50–1.75 meters deep, there were three unslipped fragments of a pipe or pipes. Two of these have three joined cylinders. The cylinders average one centimeter in diameter. In Pit VI, adjoining, a similar panpipe fragment came out of Level 6. This piece shows four cylinders and is the base

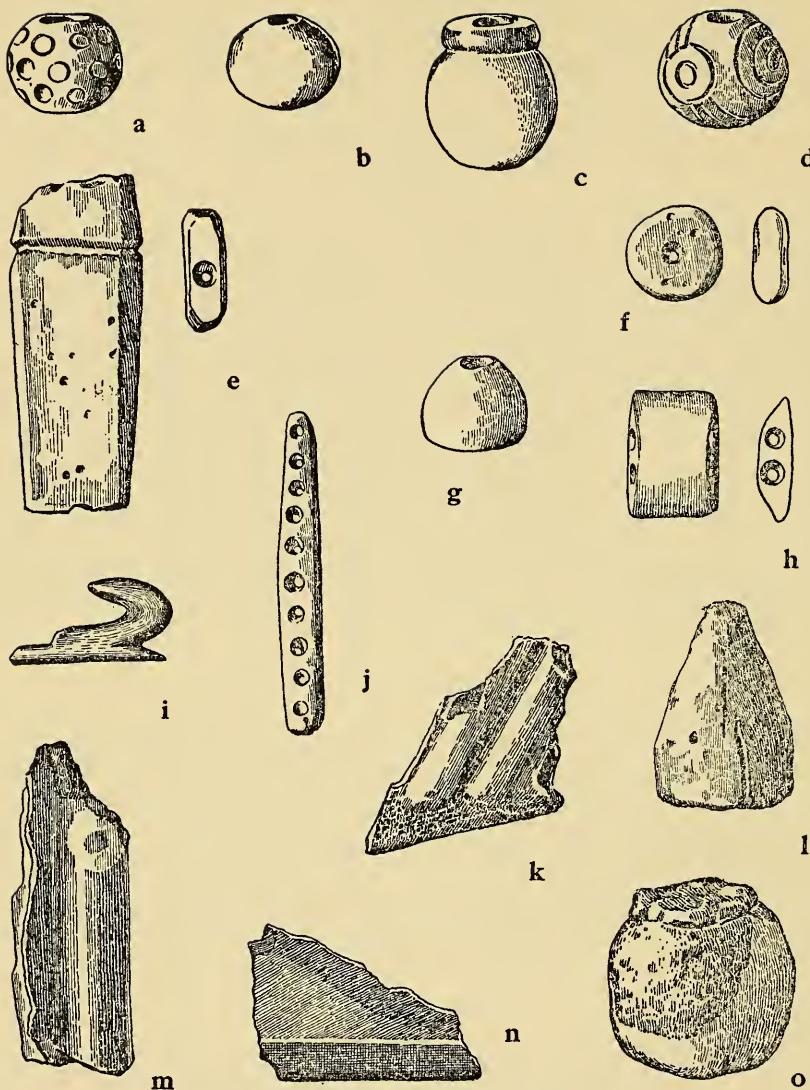


FIG. 8. ARTIFACTS FROM SITE E

a, jadeite(?) spindle whorl set with shell; b, c, lapis lazuli whorls; d, incised pottery spindle whorl; g, stone whorl; e, f, h, j, shell beads; i, bone atlatl hook; k, m, n, fragments of panpipes; l, wooden "plug"; o, sealed, unfired clay vessel. Size: a-j, natural size; k-n, $\frac{1}{2}$ natural size; o, $\frac{1}{4}$ natural size

or bottom end of the instrument (Fig. 8k). The base slants at a 45-degree angle to the long axis of the cylinders. Along the bottom, on both sides, are impressions of what appear to be textiles. In Pit II, Level 5, 1.25–1.50

meters deep, a single cylinder with basal portion attached was found. This one had the same textilelike impressions along the bottom. A single cylinder fragment was found in Pit V, Level 1 (0–.50 meter).

FIGURINES, ADORNOS, AND MISCELLANEOUS POTTERY OBJECTS

Under this heading are included various human and animal representations in ceramics. Some are obviously parts of pottery vessels; others may have been broken from vessels or may be parts of individual figurines; and a few are toys. One of the most striking pieces is the effigy of a man, or an owl, or perhaps a combination of these two (Fig. 9a). It is a hollow fragment with only the head and part of the shoulders intact and may have been broken from a vessel.⁹ Total height is 6.5 centimeters and breadth is 7 centimeters. The nose is beaklike, merging with the top of the head; the eyes have been formed by small bits of clay placed in incised slots; the mouth is a single incision. Painted decoration of white on a red slip is distinctly White-on-red in style, and the provenience is from the White-on-red rubbish of Pit VII. This specimen has also been counted as a White-decorated sherd in the stratigraphic count for Level 17 of Pit VII.

There are six other anthropomorphic representations in the collection. Two of these are heads, perhaps broken from figurines. In cross section they are flat and taper toward the top of the head. The faces are broad, with long eyes formed by incised slits set with tiny pellets of clay. These clay pellets have been punched to form pupils. The nose is high and arched. Nostrils are made by punctations, and the end of the nose appears to be cut off or mutilated. The more complete of the two measures 6 centimeters across the face (Fig. 9c). It came from Pit VII, Level 14 (3.50–3.75 meters), a White-on-red period level. The more fragmentary specimen (Fig. 9b) came from the same pit, Level 1 (0–.50 meter). There are two other very small sherds suggesting heads of the same style. These come from Pit II, Level 1 (0–.50 meter) and Pit IV, Level 1 (0–.50 meter). A third human face is very similar to the first two, with inset and

punched eyes and mutilated nose. This one, however, is on a sherd from a White-slipped bowl or jar (Fig. 9e). The face is on the vessel exterior just below the rim. The sherd came from Pit VI, Level 8 (2.00–2.25 meters).

Facial mutilation is encountered again on an *adorno* of a quite different style. This specimen is a small (3.5 centimeters high), solid, mold-made head of a man which appears to have been broken from a vessel (Fig. 9f). It was at one time white-slipped. The face is well proportioned and realistic. A headdress is shown by a headband and two ridges along the top of the head. Eyes are bulging but not punctated. Two holes, one in each side of the head, suggest either mutilation or ornamentation. The end of the nose has probably been clipped, and there is a deep gash across the lip (not accidental breaking). This head came from Pit III, Level 2 (.50–1.00 meter).

A painted human face came from Pit II, Level 1, 0–.50 meter (Fig. 9i). This may have been either an *adorno* or a figurine. About three fourths of the face remains, showing one eye, one eyebrow, the mouth, and the area of the nose. The nose was probably appliquéd and has been destroyed. The face is painted white with the features done in black. Along one side of the face there is some red paint. A second painted specimen is complete and looks like a toy (Fig. 9h). It was found with child Burial 1 at the bottom of Pit VI, a grave of the Intermediate period. The modeling is extremely crude. Breasts, arms, feet, and head are represented. The entire figure is white-slipped and decorated with black dots. Two of these dots serve for eyes. Fastened to the back is a little loop handle. Total height is 5.2 centimeters. A third human effigy fragment is a hand which came from Pit IV, Level 9 (4.00–4.50 meters), White-on-red period. It is red-slipped and decorated with white. This piece was counted as a White-decorated sherd

⁹ Kroeber, 1926b, Plate 90g, suggests such a vessel.



FIG. 9. ADORNOS OR FIGURINES FROM SITE E

a, White-on-red owl or demon head; b, c, fragments of human faces; d, dog (?);
 e, human face from a White-slipped sherd; f, solid human head *adorno*;
 g, monkey (?); h, anthropomorphic figure with handle; i, painted human
 face; j, a bee (?), complete figure; k, l, animals (?). Size: all $\frac{1}{2}$ natural size

in the stratigraphic count. Full length is 3.5 centimeters.

Animal figures are even more varied than the human representations. There are six of these, including a guinea pig or fish (?), a bee (?) (Fig. 9j), a dog (?) (Fig. 9d), a monkey (?) (Fig. 9g), and two even more doubtful species (Fig. 9k, 9l). The guinea pig or fish is a hollow head portion and may be a part of a white-slipped vessel. Length is 6.5 centimeters. The eyes and mouth are boldly but realistically imitated. The specimen came from Pit III, Level 4 (1.50–2.00 meters). The bee is complete. It was found with the child burial (Burial 1) in Pit VI. The effigy is hollow and may be a whistle. The single opening is a small hole in the top of the head. Eyes, nostrils, and mouth have been made by incising and modeling. Additional modeled features, perhaps a handle, have been broken from the back and head; a white slip once covered the entire artifact; and black stripes were lined across the back and wings.¹⁰ Length is 7 centimeters and height 3.5 centimeters.

The monkey is a small *adorno*, red-slipped, with white decoration. It was taken from Pit VII, Level 17 (4.25–4.50 meters) and has been counted as a White-decorated sherd. It is 4.5 centimeters long and about 2 centimeters high. Little legs have been modeled on each

side. Eyes, nostrils, and mouth are done by incision and punctuation. The dog, or possibly a bear, is a hollow fragment, perhaps from a vessel. Eyes and nostrils are punctuated, and teeth and mouth have been modeled along both sides of a pointed snout. Size is 5 by 5 centimeters. It was found in Pit III, Level 3 (1.00–1.50 meters). The two more doubtfully identifiable animal heads are probably *adornos* from White-on-red vessels. One comes from Pit II, Level 1 (0–.50 meter) and the other from Pit V, Level 8 (2.00–2.25 meters). The faces and features are combinations of modeling and incising. Bears or dogs may be indicated. Both have been red-slipped and decorated with white, although the paint is now badly flaked. One has been pierced through the ears and has a blunted or mutilated nose. Each measures about 3 by 4 centimeters.

There are two other fragments which may be bodies of men or animal figures. Both are hollow. One is from Pit IV, Level 8 (3.50–4.00 meters), the other from Level 9 of the same pit.

One toy pot of coarse unslipped ware came from Pit VI, Level 5 (1.25–1.50 meters), an Interlocking period provenience. It is 4 centimeters in diameter and 2.2 centimeters high.

SPINDLE WHORLS

Eight artifacts are considered under this heading. There are three disk whorls, two of them made of white-slipped potsherds. The other five whorls are spheroid and made of stone or pottery. The smaller of the potsherd whorls is 2.5 centimeters in diameter and 1 centimeter thick. It has a central perforation 8 centimeters in diameter. Its provenience is Pit VI, Level 5 (1.25–1.50 meters). The larger sherd whorl is curious in that it has two perforations, one in the exact center and the other about 1 centimeter off the center. The disk is 5 centimeters in diameter and 5 centimeters thick. It was found in Pit VI, Level 1 (0–.50 meter). The remaining disk whorl is of gourd. It measures 4.5 centimeters in diam-

eter and 4 centimeters in thickness. It came from Pit II, Level 3 (1.00–1.50 meters). All of these come from Interlocking period levels.

It is possible that some of the spheroid whorls may be beads. In two instances the holes seem rather small for a spindle shaft. Four of the five are of stone; the other is of pottery. Three of the handsomest stone whorls were taken from Burial 2 at the bottom of Pit VII. One of these was manufactured of a light green stone, perhaps a jadeite (Fig. 8a). It is 1.6 centimeters in diameter and 1.3 centimeters high. The sides are rounded and inlaid with small circular pieces of white and red shell. These are set in three rows of eight pieces each, alternating in color, around the body of the whorl. The inlays have been accomplished by drilling small holes in the

¹⁰ Kroeber, 1926b, Plate 9b, shows an effigy vessel decorated in similar manner.

ARTIFACTS FROM CERRO DE TRINIDAD

stone and fastening the shell pieces in these with pitch or gum. The other two specimens found in conjunction with the inlaid whorl are of polished lapis lazuli. One is a flattened spheroid (Fig. 8b), 1.6 centimeters in diameter and 1.3 centimeters high. The second is also 1.6 centimeters in diameter but is 2 centimeters in height. It has a rounded "pot-collar" at one end (Fig. 8c). All three were found in a White-on-red period grave.

Another stone whorl came from Pit VI, Level 4 (1.00-1.25 meters). This is made of

honey-colored quartzite. It is 1.3 centimeters in diameter and 1.1 centimeters in height. One end is rounded, the other flat (Fig. 8g). The provenience is of the Interlocking period.

A pottery whorl, or bead, came from Pit IV, Level 8 (3.50-4.00 meters). It is spheroid with a diameter of 1.8 centimeters and a height of 1.6 centimeters. An incised ornamentation, covering most of the surface, consists of two concentric circles with two three-line scrolls attached (Fig. 8d). Association is probably with the White-on-red period.

BONE ARTIFACTS

A small bone atlatl hook (Fig. 8i) came from Pit VI, Level 3 (.75-1.00 meter). It has an over-all length of 2.2 centimeters and was carved from a single piece of bone. The base is straight, with a delicate projection at one end and a prepared nub for hafting at the other end. The notch or hook is deep. The provenience is of the Interlocking period.

A bone awl, made from the leg bone of a

deer, came from Pit II, Level 1 (0-.50 meter). It is 16 centimeters long, and was made by fracturing the bone longitudinally. A blunt triangular point, slightly worn, indicates its use as a tool.

An adult human femur with the proximal end broken away was found in Pit II, Level 4 (1.50-2.0 meters). A projection of the broken end has been worn smooth with use.

WOODEN ARTIFACTS

A wooden spear or throwing-stick projectile came from the bottom of Pit VII in probable association with one of the burials at that depth. It is in three pieces with a total length of 61 centimeters. The diameter is 1.5 centimeters. Within 20 centimeters of the point it commences to taper. The wood is hard, is still in excellent condition, and was probably fire-hardened. Association is with the White-on-red culture.

Five top-shaped objects of wood were found in the rubbish of the several pits. These vary from 6 to 4 centimeters in length and 3.5 to 2 centimeters in maximum diameter. Four

are very similar as to form (Fig. 8l); the fifth has a ragged stubble on the broad end and may be an unfinished specimen. Four were recovered in the Pit VII excavations: one from the north extension; one from Level 4 (1.00-1.25 meters); one from Level 5 (1.25-1.50 meters); and one from Level 2 (.50-.75 meter). The other came from Pit II, Level 2 (.50-.75 meter). Their use is unknown; perhaps they served as plugs or stoppers. As to cultural association, their consistent appearance in upper levels and absence in lower ones suggests that they are an Interlocking period artifact type.

OBJECTS OF GROUND STONE

A circular disk of light-colored stone was found in Pit VII, Level 14 (3.50-3.75 meters). Dimensions are 10 centimeters in diameter and 1 centimeter in thickness. It was ground into general outline, but it is not well

smoothed. The edge is beveled as though to form a lid. Cultural association is with the White-on-red style, on the basis of stratigraphic position.

Two small, smoothed stone balls, which

may have been used for pottery smoothers, came from Pit I, Level 1 (.0-.50 meter) and Pit II, Level 1 (.0-.50 meter).

A crude circular stone, flat on one side and rounded on the other, may have been used as a hammer. It is 16 centimeters in diameter and 5.5 to 6.5 centimeters thick. Pecking or hammer marks show along the edge. None of the surfaces shows grinding or smoothing. Its provenience is Pit II, Level 1 (.0-.50 meter).

Two fragmentary ground and well-

smoothed stone pieces were probably manos. One is 11 centimeters long, 6.5 centimeters wide, and 3.5 centimeters thick. One end is blunted from pecking or hammering; the other end is broken off. In cross section, it is plano-convex. Both the flat and rounded surfaces are well ground down. This specimen came from Pit III, Level 2 (.50-1.00 meter). The other specimen is a small fragment of a larger artifact; it came from the same pit and level.

CLOTH

Around the skull of Burial 2, Pit VII, a very ample cotton cloth headdress was wound. The original color may have been white or a light neutral shade. The fragments are now

brown. These show a fabric of medium-fine thread woven into a fine mesh. The weave is simple over-and-under technique. Warp and weft are of thread of the same size.

METAL

Over the face of Burial 2, Pit VII, with a number of fragments clinging to the cloth headdress mentioned above, was a thinly beaten mask of copper and gold. This mask, or face cover, had crumbled to pieces. Most

of the pieces, which are heavily corroded, are copper. A few thin sheets of gold, or a gold-copper alloy, were lying over the nasal bones. These were the only particles of metal obtained in the excavations.

ORNAMENTS OF SHELL

Most of the shell ornaments, which are beads, are made from a large red and white bivalve, the *Spondylus pictorum*. This shell is common in the waters of the Pacific coast to the north, and the southern extent of its present-day distribution is the Gulf of Guayaquil in Ecuador. Presumably the shells were a trade material brought into the valley of the Chancay. One shell, virtually complete, was found in association with Burial 2, Pit VII. This one, which is typical as to size, is 11.5 by 11.5 centimeters. The natural ridges on the outer surface of the shell have been ground down and smoothed. A great number of beads of all sizes, made from the *Spondylus pictorum*, formed a necklace for Burial 2, Pit VII. There are four different types of these beads. The largest type, of which there were three in the necklace, are flat, rectangular beads, about 5 centimeters long, almost 2 centimeters wide, and .6 centimeters in thick-

ness (Fig. 8e). A single hole has been drilled through the long axis of each. A medium-sized, rectangular type was more abundant, there being eighteen of these. They vary from 3 to 1.3 centimeters in length and from 1.8 to .6 in width and are .4 centimeter thick (Fig. 8h). Lengthwise, the ends are worked down on both sides to an edge. They are all drilled through the short axis with two holes. Besides the rectangular types, there are two sizes of round, crudely shaped disk beads. The larger of these (Fig. 8f) is 1 to .7 centimeter in diameter and .5 to .2 centimeter in thickness. All are perforated with a central hole. There were forty-eight of these included in the necklace. The smaller circular or disk beads are very imperfectly shaped and are less than .5 centimeter in diameter. Approximately two hundred of these were found with the others near the skull of the burial.

By the wrist of the same burial, seventeen

ARTIFACTS FROM CERRO DE TRINIDAD

other beads of the same type of shell were found. Fourteen of these are of the smaller rectangular shape with a double perforation through the short axis of the bead. The other three are quite unique. They are 4 centimeters in length, .5 centimeter wide, and .3 centimeter thick. Each has been drilled through the thinnest dimension with ten perforations (Fig. 8j).

In a White-on-red style vessel, also with Burial 2, Pit VII, a few beads of the same

type of shell were found. There are one two-holed rectangular bead, one large disk bead, and thirteen small disk beads in this lot. All of these beads of shell were from a White-on-red period grave.

Two simple beads from the child burial (Burial 1) in Pit VI are of a small, spiral type of shell with the top cut off to permit suspension. These two are of a size, 3.5 centimeters in length and 2 centimeters in diameter.

TABLE 2
PROVENIENCE OF ARTIFACTS
ILLUSTRATED

Figure 8

	<i>Pit</i>	<i>Location in pit</i>
a, b, c	VII	Burial 2
d	IV	Level 8
e, f, h	VII	Burial 2 (necklace)
g	VI	Level 4
i	VI	Level 3
j	VII	Burial 2 (bracelet)
k	V	Level 6
l	II	Level 2
m	IV	ext. (about 1.00 meter)
n	IV	Level 5
o	VII	Level 11

Figure 9

	<i>Pit</i>	<i>Location in pit</i>
a	VII	Level 17
b	VII	Level 1
c	VII	Level 14
d	III	Level 3
e	VI	Level 8
f	III	Level 2
g	VII	Level 17
h	VI	Burial 1
i	II	Level 1
j	VI	Burial 1
k	II	Level 1
l	V	Level 8

The Stratigraphy at Cerro de Trinidad, Site E

POTTERY AND STRATIGRAPHY

THE STRATIGRAPHY of pottery types in the refuse at Cerro de Trinidad, Site E, provides the primary datum for arranging the pottery, artifacts, structures, and burials in a culture sequence. In the presentation of this stratigraphy, the pottery types will be considered first. A chronological placement of structure, physical strata, and burials will follow. Finally, a definition of the three periods at the site will be outlined.

The excavation at Pits IV and VII gives the best stratigraphic picture and is the principal evidence for chronology. The occurrences and percentages of occurrences per level of the White-decorated and Interlocking types in Tables 7 and 8 and the graphs (Figures 10 and 11) show the reciprocal relationship of these two types. In Pit IV the greatest con-

centration of White-decorated sherds is between 3.50 and 5.00 meters deep, Levels 7 to 10 inclusive. Level 11 (5.00-5.50 meters), the lowest in the pit, is not expressed on the graph, as no decorated sherds, other than the White-slipped type, were found in this level. With the exception of Level 6 (2.50-3.00 meters), some White-decorated sherds were found in every level above the zone of greatest concentration. Both numerically and in percentages, however, the type is lessened in the upper half of the pit. Opposed to this, the Interlocking type has its maximum occurrence in Level 3 (1.00-1.50 meters) and above. Below Level 3 the type continues in diminished percentages to Level 8. No Interlocking sherds are found in Levels 9 or 10.

Another type of the White-on-red style,



FIG. 10. POTTERY TYPES FOR PIT IV, SITE E (by Percentage)

the White-zoned, including both the fine-ware and coarse-ware varieties, has been graphed for Pit IV. Although it appears in all ten levels, there is a suggestion of greater frequency in the lower two thirds of the pit. The action of this type, however, is not so marked as the White-decorated or the Interlocking. The White-slipped type, both fine and coarse ware, follows the same trend as the White-decorated. Above Level 6 it averages about 3 percent of the total number of sherds in each level. In Level 6 and below, this average is stepped up to approximately 8 percent of the total sherds per level for the fine-ware variety, and 16 percent for the coarse ware.

Of the minor types of the Interlocking style, Three-color curvilinear and naturalistic falls into the pattern of occurrence set by the Interlocking type. Dot and Circle types, although appearing in small quantities, are mostly in the upper part of the Interlocking occurrence.

In Pit IV the Smooth plain red shows its stratigraphic affinity to the White-on-red style by its large occurrences in the lower levels.

In rim and vessel form, there is a strong resemblance between Smooth plain red and most of the White-on-red types. Many body sherds of Smooth plain red also are undoubtedly from decorated White-on-red vessels. Stratigraphy of Smooth plain red is bound to be blurred, however, as successful distinctions could not be made between plain red, well-smoothed sherds of Interlocking affiliations, and the more abundant Smooth plain red associated with the earlier White-on-red style. There is a suggestion in this pit of a similar frequency trend for Coarse plain red; but this is not substantiated by Pit VII and is undoubtedly the result of selective discarding, a matter discussed below.

Among other features of the stratification is the appearance of the two Late Chancay types in Pit IV, Levels 1 and 2, and not below these depths. The superficial position of these types in the deposits is reemphasized in the other test pits. The four sherds of the Negative painted style are all in Level 9 (4.00-4.50 meters), a position corroborated by the appearance of two sherds of the same type in Pit VII, one in Level 13 (3.25-3.50 meters).

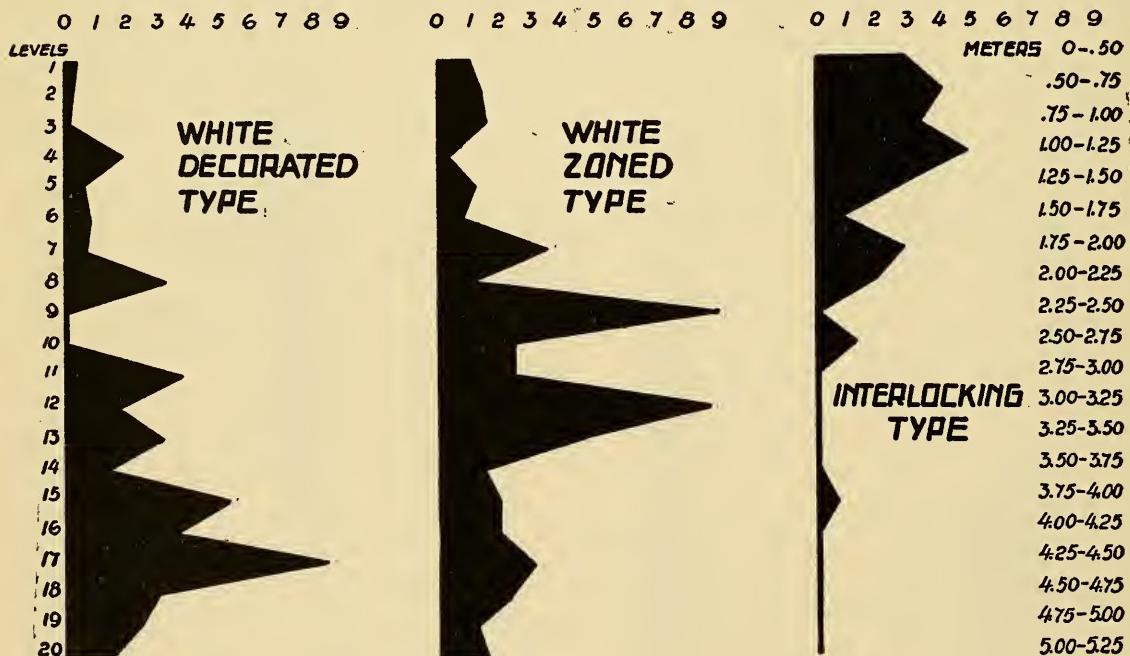


FIG. 11. POTTERY TYPES FOR PIT VII, SITE E (by Percentage)

and one in Level 17 (4.25–4.50 meters). Incised and punctated sherds are rare and are found only at the very top and near the bottom of the pit. This widely divergent occurrence is also marked in Pit VII and points to a difference in the sherds that have been classified under this heading. Although only a very few sherds are involved, it was noted that nearly all of the hollow-reed type of punctations occur in the upper levels, while the sherds from the bottom of Pits IV and VII show a fine dot or triangular punctuation. "Bucchero," or Polished black plain ware, is scattered through the upper three fourths of both Pits IV and VII without showing any significant increases or decreases in frequency.

Pit VII has a similar vertical distribution of the key types, White-decorated and Interlocking. Some of the irregularity in the graphs can be explained by the use of .25-meter rather than .50-meter levels as in Pit IV. Some of it is unexplainable, but a smoothing of these irregularities leaves no doubt as to the time story. All high occurrences of White-decorated in Pit VII, save one, are found in Level 11 and below (2.75–5.25 meters). The exception is Level 8 (2.00–2.25 meters), whose medium-high frequency is overemphasized by the fact that no White-decorated sherds were found just below in Levels 9 and 10. Very few sherds obtained in either of these levels, owing to the fact that at this point the pit passed through solid adobe. The complete absence of the Interlocking type is also noted for Level 9. The relatively high percentage of White-zoned in Level 9 seems more reasonable when an occurrence of four sherds of that type out of a total of forty-five is realized as the basis for computing the percentages. The White-zoned type, as in Pit IV, appears in all levels. A higher proportion of the type is found below the top 1.50 meters, or below the concentration zone of the Interlocking type. The Pit VII graphs suggest a maximum for the type intermediate between that for White-decorated and Interlocking. There is a slight indication of this in the graphs for Pit IV.

In Pit VII, White-slipped, like White-zoned, was not divided into coarse and fine ware in the sherd count but classified as one type. The combined type does not check very well with

the action of either the fine or coarse White-slipped type in Pit IV, although a greater popularity for allover white painting in the earlier levels is still implied.

Interlocking, in Pit VII, occurs in quantity down to a depth of 1.50 meters. From 1.50 to 3.50 meters deep there are moderate amounts of the type. Below 3.50 meters, as in Pit IV, there is practically an absence of Interlocking or any related three-color type. Pit VII resembles Pit IV in the confinement of Dot, Circle, and X-mark types to the upper Interlocking distribution. "Probable Interlocking," a classification set up to take care of small or eroded sherds suggesting the Interlocking type, is confirmed in both Pits IV and VII by its close concurrence with Interlocking. Smooth plain red, in Pit VII, is more common in the lower White-on-red levels. Coarse plain red, on the other hand, is irregular but on the whole makes a stronger showing toward the top of the pit. Negative painted and Incised and punctated sherds check closely with Pit IV, as do the Late Chancay types and the Polished black ware.

The concurrence of the two pits on several major points is gratifying. First, there is a zone below 3.50 meters deep in which no three-colored sherds are found. In this same zone occur the greatest numbers of the White-decorated type. Second, above the 1.50-meter line are to be found most of the Interlocking sherds, although a few White-decorated pieces come from these top levels. Third, there is an intermediate depth of from 1.50 to 3.50 meters below surface in which some White-decorated sherds and lessened amounts of Interlocking sherds are found. Fourth, related three-color types conform to the Interlocking distribution in the refuse and are most common in the upper part of that distribution. Fifth, types like White-zoned and Smooth plain red, which are typologically related to White-decorated, tend to be more abundant in the lower levels of the two pits. And sixth, Chancay Black-on-white and Chancay White-slipped occur only in the top .50 to 1.00 meter. These data enable us to place the cultural materials from the site in a chronological scheme.

As to the relative dependability of Pits IV and VII, both have similar soil strata and

structures. Both have an adequate number of sherds for stratigraphic techniques, and the sherd count by .50-meter levels is about the same for the two pits. Pit IV does not have the semisterile layer of adobe encountered at Levels 9 and 10 in Pit VII. But from the standpoint of classification, Pit IV is the less reliable of the two. As mentioned in the first section of this report, all sherds from Pit VII were classified in the laboratory, while discards of plain body sherds from Pit IV were made in the field. The number of discards per level is given in the table of occurrences for Pit IV. Most of the discards were of Coarse plain red. It is obvious that if all of the discarded sherds of this type were added to the various levels in the Coarse plain red column, the frequency of that type would more closely resemble the high occurrences of Coarse plain red in the upper levels of Pit VII. Under examination in the field before the types were formulated, it is likely that a number of other plain or plain-slipped types were also discarded. If so, this might account for the marked diminution of the White-slipped (coarse) type in the upper levels of Pit IV, a phenomenon not so striking in Pit VII. These weaknesses do not, however, affect the main trends of the stratigraphy which are borne out by the key decorated types.

Neither Pit V nor Pit VI (Tables 10 and 9; Figs. 13 and 12) presents the complete stratigraphic story evident in Pits IV and VII. Pit

VI, from which no discards were made in the field and in which the physical strata were more horizontally laid, is the better of the two. Total depth is 3.25 meters. The distribution of types in Pit VI gives the impression that the pit was contemporaneous with the upper 3.50 meters of Pits IV and VII. Occurrences of none or one or two sherds per level of White-decorated are noted down to 1.75 meters. Beginning at 1.75 meters, the occurrences and percentages of this type pick up a little and remain constant until the twelfth level (3.00-3.25 meters). In this lowest .25 meter there is a considerable increase in White-decorated. There is little to say about the behavior of White-zoned other than that it is present in all levels.

The Interlocking type makes up a much greater percentage of total sherds per level in the upper part of this pit than it does in Pit IV or Pit VII. There is no steady decrease of the type until Level 7 (1.75-2.00 meters), when it begins to decline; however, the type is present in appreciable strength all the way to the bottom of the pit. The Circle, Dot, and Three-color curvilinear and naturalistic types parallel, in a small way, the action of Interlocking but disappear completely a little short of the bottom of the pit.

White-slipped, Smooth plain red, and Coarse plain red vary little in frequency throughout the twelve levels of the pit. Polished black ware also occurs from top to bottom with the

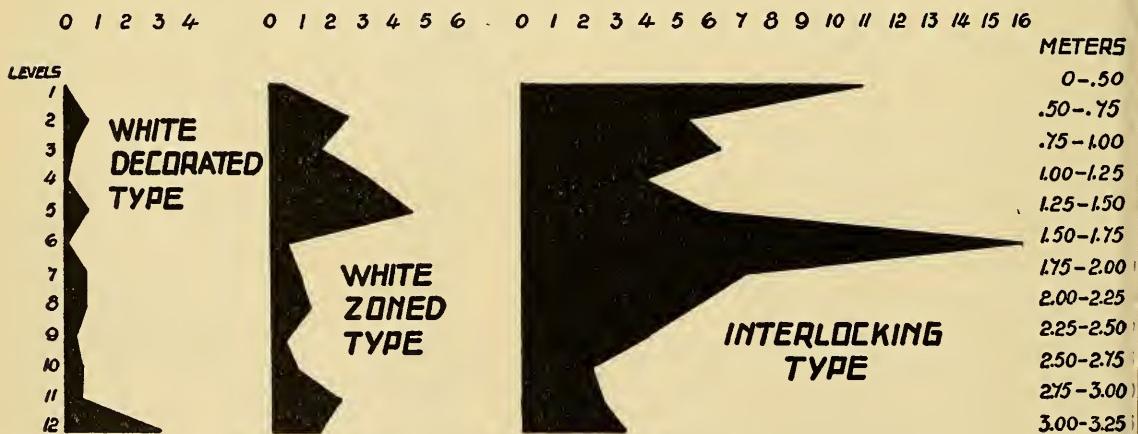


FIG. 12. POTTERY TYPES FOR PIT VI, SITE E (*by Percentage*)

exceptions of the first and twelfth levels. There are a rather large number of sherds of both the Late Chancay types in the top .50 meter.

Pit V is very much like Pit VI in type distributions except for an unusually large occurrence of the Interlocking type in the bottom level (.275-.300 meters). This sudden increase follows a steady decline of the type which begins at Level 6 (1.50-1.75 meters). White-decorated is scattered through most of the levels and shows a sharp percentage increase in the bottom level. Level 12 (.300-.325 meters) contained only four plain sherds and is not considered in the graphs. The bag of sherds from Level 5 (1.25-1.50 meters) was lost in transit to the laboratory; hence, the occurrences for this level are unknown and the graph lines have simply been extended from Level 4 to Level 6.

The evidences for stratigraphy in Pits V and VI can be summed up as follows. First, the Interlocking type is in all levels, but there is a dropping off in percentage of occurrence in the lower 1.50 meters. Second, White-decorated is found in small amounts at all depths, but there is a suggestive percentage increase in the bottom level of both pits. Third, three-color types related to Interlocking have almost the same occurrences that they have in Pits IV and VII. Fourth, White-zoned, White-slipped, and Smooth plain red types, more closely allied to the White-on-red style than to the Interlocking, appear without change throughout the pits. And Fifth, in both Pits

V and VI, Late Chancay types are found only in the first level. These conditions suggest that the rubbish excavated in Pits V and VI dates from that time, during the occupation at Site E, when the White-decorated was a fading type and when the Interlocking style was growing to a position of dominance.

In Pit II there are six levels of .25 meter each. Disregarding the bottom level, which has only twenty-four sherds, some slight shifts in percentages of types in the remaining five levels reflect the sequence of Pits IV and VII. White-decorated and Interlocking increase and decrease respectively in fractional percentages with increasing depth. The five Late Chancay sherds in the pit are in the top .25 meter.

Pits I and III are thoroughly mixed as far as the White-on-red and Interlocking styles are concerned. The rubbish at both locations is quite shallow. In spite of this, it is observed that Late Chancay sherds occur only in the upper half of each pit.

It is obvious from the foregoing that the sequence at Site E is not a "closed" stratification. The continuation of White-on-red style sherds throughout the midden implies cultural continuity. Even the key type, White-decorated, is found consistently at all depths throughout the deep pits, IV and VII. There are, however, three zones or periods in the rubbish of Pits IV and VII which are reasonably distinct from each other in ceramic content and which coincide with some structure

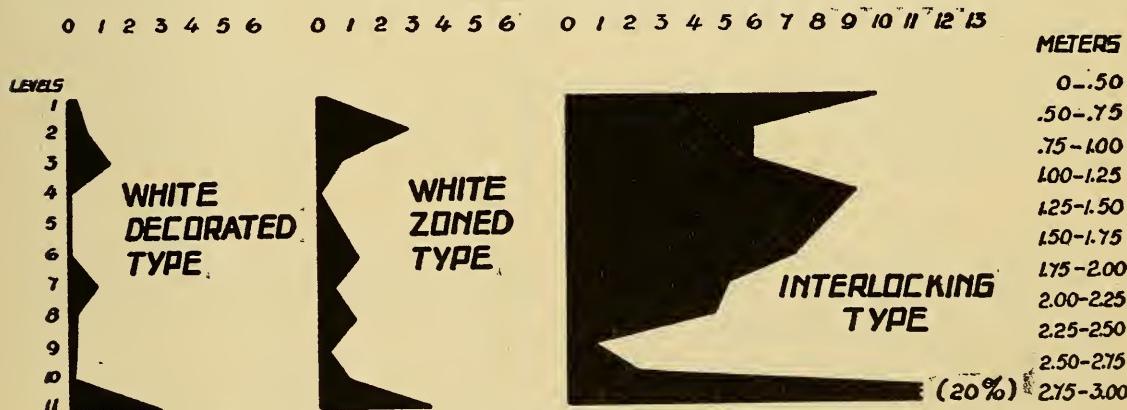


FIG. 13. POTTERY TYPES FOR PIT V, SITE E (by Percentage)

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levels: (1) There is a bottom White-on-red zone below 3.50 meters deep which was devoid of any Interlocking style sherds; (2) there is an intermediate zone from 1.50 to 3.50 meters below surface in which the Interlocking and White-on-red styles were found mixed;

(3) and at the top, from 0 to 1.50 meters deep, there is a zone of refuse in which the Interlocking style was definitely predominant. From the stratigraphy of types, certain inferences can be made with relation to the soil profile on Figure 2.

STRUCTURES AND STRATIGRAPHY

Floor E, encountered in both Pit IV and Pit VII, is at a depth of 1.50 meters. This floor is one of the most important in extent and is related to three walls, each of a different type of construction: puddled adobe, brick adobe, and rock (J, L, N on Fig. 2). On this floor, four Interlocking restorable beakers and a large Interlocking mammiform jar were found broken *in situ*. As the concentration of Interlocking sherds is above Floor E, this floor appears to mark the division between the Intermediate and Interlocking periods. Two clay floors of similar construction were found above E in Pit VII. Floor D may be related to the rock wall, J, but the north profile (see inset, Fig. 2) shows the same wall on Floor E. Floor C, very near the surface, has what looks like the remnants of a wall of small, dome-shaped adobes in association.

The possibility that any of the constructions above the 1.50-meter depth could have been made by the Late Chancay peoples is not well supported. Floor E is ruled out by the *in situ* Interlocking vessels. Floor C, the most recent structural level, has superimposed upon it a row of small, dome-shaped adobes, a type of adobe not found in any Late Chancay site in the valley.

One-half meter below Floor E is the clay Floor F. On this lower floor a White-zoned jar was found smashed *in situ*. Floor G, and

the rock and rubble Wall M, at 3.50 meters below surface, may form the bottom of the Intermediate period rubbish, as it is the lowest depth at which Interlocking sherds were found.

Below 3.50 meters there are no floors or walls and no evidences of structures excepting the single wooden post H and the poles in connection with Burials 1 and 2 at the bottom of Pit VII. The rubbish between 3.50 and 5.00 meters in depth, above the ash on the old ground surface, contained only sherds of the White-on-red style.

The association of structure with cultural stratigraphy in Pits V and VI is not as striking as in Pits IV and VII. The top 1.00 meter of Pits V and VI is a thick adobe platform or floor. There are evidences of small occupation layers through this adobe. The large amounts of Interlocking sherd material contained in it, and extending into part of the rubbish beneath it, make it clear that the platform, or closely packed series of floors, was built during the Interlocking period. Most of the rubbish below the clay, and a thin adobe floor level at 2.75 meters deep, can be attributed to the Intermediate period. There is no stratum representing the "pure" White-on-red period at this location, so it is inferred that the inception of the rubbish at this point began sometime in the Intermediate period.

BURIALS AND STRATIGRAPHY

All of the burials in Pits IV and VII belong to the White-on-red period. An unnumbered burial was seen in the profile of Pit IV below Floor G and inclusive in the rubbish of the White-on-red zone. Burials 1 and 2 of Pit VII, Olla A, and the burial, or burials, of Olla B, came out of the sterile sand under-

lying the rubbish. A list of the cultural material from these two important graves is given in Table 3.

Burials 1 and 2 of Pit V came from the sand immediately beneath the rubbish of that pit. The lowest levels of Pit V are of the Intermediate (or mixed) period. Neither burial

TABLE 3
GRAVE ASSOCIATION LISTS: PITS IV
AND VII

	Catalogue Number
Pottery vessels	
White-decorated	
2 small mammiform jars	536, 537
4 bowls, incurved, lipped, 2 handles	535, 542, 546, 551
1 bowl, incurved, lipped	545
1 eccentric form	547
Red-on-white	
1 jar, vertical or flaring neck, no handles	548
1 jar, vertical or flaring neck, 2 handles or knobs	556
1 bowl, lipless, low, flaring	554
Combination white-and red decorated	
1 bowl, incurved, lipped, 2 handles	560
White-zoned (fine)	
6 small mammiform jars	
529, 528, 561, 544, 543, 541	
2 large mammiform jars	552, 559
4 bowls, incurved, lipped, 2 handles	
550, 562, 564, 565	
1 jar, vertical or flaring neck, no handles	540
White-slipped (fine)	
2 bowls, incurved, lipped, 2 handles	566A, 566B
White-zoned (coarse)	
2 large jars used as covers for burials (Ollas A and B)	530A, 530B
Artifacts	
1 cloth headdress	538
1 copper and gold mask	538
2 lapis lazuli spindle whorls (or beads)	533
1 stone spindle whorl (or bead) inlaid with shell	533
14 shell beads found in vessel	567
1 large worked shell	534
1 bracelet of shell beads (17 pieces)	531
1 necklace of shell beads (about 270 pieces)	539
1 wooden spear or dart	582

TABLE 4
GRAVE ASSOCIATION LISTS: PIT V

BURIAL 1	Catalogue Number
Pottery vessels	
Red-on-white	
1 jar, vertical or flaring neck, no handles	493
BURIAL 2	
White-zoned	
1 large mammiform jar	494
1 jar, small and fragmentary	495

TABLE 5
GRAVE ASSOCIATION LISTS: PIT VI

BURIAL 1	Catalogue Number
Pottery vessels	
White-slipped	
1 large mammiform jar	512
Three-color "Intermediate"	
2 bowls, incurved, lipless	511, 513
Artifacts	
1 clay figure of a bee (?)	508
1 human effigy (toy) with handle	509
2 shell beads	510
Hollow unfired lumps of clay	[no numbers]
BURIAL 2	
Pottery vessels	
White-decorated	
1 bowl, lipless, low, flaring (maroon-red)	516
1 jar, vertical or flaring neck, no handles	515
White-zoned	
1 large mammiform jar	514
BURIAL 3	
Pottery vessels	
Coarse plain red	
1 huge olla	519
BURIAL 4	
Pottery vessels	
White-zoned	
1 jar, vertical or flaring neck, no handles	520
1 bowl, incurved, lipped, 2 handles (very large specimen)	521

TABLE 6
GRAVE ASSOCIATION LISTS: PIT II

	Catalogue Number
Pottery vessels	
Smooth plain red	
1 bowl, lipless, incurved, 2 handles	488
Coarse plain red	
1 jar, vertical neck, 1 flat or round han- dle on neck (a miniature)	487
Artifacts	
1 gourd bowl	[no number]

was found under a sherd cover. Pottery associations with both burials were White-on-red style vessels. See Table 4.

The four graves in Pit VI were all sherd covered. Their position in the strata is exactly the same as that for Burials 1 and 2 of Pit V: they were found in the topmost part of the sand underlying Intermediate period rubbish. See Table 5.

In Pit I, two burials, an adolescent and a child, were found without sherd coverings or accompanying artifacts. There is no means of assigning these burials to any of the three periods.

The infant burial in Pit II lay in the top of the sand, just beneath the rubbish. There was no sherd covering. The only clue to period is the overlying refuse, suggesting the Intermediate period, through which the grave does not appear to have intruded.

SUMMARY OF BURIALS

Stratigraphically, the burials can be grouped in three classes: (1) those of the White-on-red period from Pits IV and VII; (2) those underlying Intermediate period rubbish in Pits V and VI and probably of the Intermediate period; (3) and those of indeterminable stratigraphic relationships from Pit I. The burial of Pit II may go with the second class, although the evidence is admittedly weak.

There are several similarities and some differences between the first and second classes of burial. Sherd coverings for burials are found in both Pit IV and Pit VII and in Pits V and VI. In the first-named excavation they have in addition a substructure of poles. A crude rock

covering was also noted for the unnumbered burial in the White-on-red stratum of Pit IV. The more elaborate mode of burial in the earlier period may be due, however, to the fact that the burials of Pits IV and VII were adults, whereas those of Pits V and VI were all infants or children. All burials at the site, except the rock-covered one just referred to, were found in the top of the natural sand. This indicates a custom of shallow burial, for in neither set of pits was there any evidence of intrusion from above through any great depth of overlying rubbish. The intact Floor G and Wall M over the burials in Pits IV and VII preclude the possibility of the intrusion of Burials 1 or 2 from the Interlocking or Intermediate periods and limit the original depth of the graves to no more than a meter, if that much.

The burials of Pits V and VI contain pottery types which link them with the White-on-red graves of Pits IV and VII. These types are the White-decorated, White-zoned, White-slipped, and Red-on-White. In addition the graves had two pots of the Three-color "Intermediate" type. Of the two vessels of White-decorated (the marker type for the White-on-red period) found with the burials in Pits V and VI, one is a low, flaring bowl of the maroon-slipped variety, the other is a lipped or necked jar. The small jar form with a vertical or flaring neck, of which there are eight in the White-on-red collection, occurs three times in the White-on-red period graves of Pit VII and has four occurrences in the graves of Pits V and VI. The remaining jar was a White-zoned specimen taken from Floor F (see Fig. 2) in Pit VII, in the Intermediate period refuse. The large mammiform jar, like the small, necked jar, is another form whose occurrence in Pits V and VI graves argues for their Intermediate period position. Six of these large jars were found at Site E. Two of the six were with the White-on-red period burials in Pit VII; three came from graves in Pits V and VI; and one is an Interlocking style painted piece from Floor E (see Fig. 2) in Pit VII. In this connection it is pointed out that neither the small, canteenlike, mammiform jar nor the small, incurved, and lipped bowl is found in any of the graves in

Pits V and VI. These two small forms seem to be most characteristic of the White-on-red period at the site. The only incurved, lipped bowl from a Pit VI grave is a large specimen without the median ridge typical of the smaller bowls of this form from the White-on-red period.

The two Three-color "Intermediate" vessels from Burial 1, Pit VI, have the median ridge but are lipless and without handles. The low, incurved, lipless bowl form has been indicated

as resembling, but not typical of, White-on-red shapes. The use of three colors suggests the Interlocking style, while the design arrangement is more like the White-on-red. Some Interlocking rim sherds from the refuse are from incurved bowls with a similar unmodified lip. Most of these have the nested-triangle variation of the fish-head motif, a design resembling the Three-color "Intermediate" bowls, especially the smaller of the two vessels, in simplicity and arrangement.

SEQUENCE OF PERIODS AT SITE E

The following descriptions of the three periods are derived from the correlations of pottery, artifact, structure, and burial stratification.

THE WHITE-ON-RED PERIOD

The evidence for this period comes from those rubbish levels and burials in Pits IV and VII below the depth of 3.50 meters. It is the first known occupation of the site. Stratigraphically, it is defined by the almost complete dominance of the White-on-red ceramic style. The period can be briefly described in the following summaries.

Pottery.—1. The principal pottery types of the White-on-red style are White-decorated and White-zoned. Both of these types enjoy their greatest frequency of occurrence during this period.

2. Minor types of the same style are Red-on-white and White-slipped.

3. The most popular forms of the style, and especially the White-decorated type, are the small mammiform jar and the incurved, lipped bowl with horizontal handles.

4. A small, necked jar, a large mammiform jar, and a plate with upturned rim are other forms.

5. Smooth plain red is more popular in this than in the later periods.

6. Animal and human (or demon) pottery *adornos*, decorated in the White-on-red style, are recorded.

7. Negative painted ware, Polished black ware, and fine-line and dot incision and punctuation decoration, each represented only by occasional pieces, are the only foreign types

found in association with the White-on-red types during this early period.

Figurines.—There is a single human figurine head of this period. It has punched clay pellet eyes and a mutilated nose.

Spindle whorls.—There are four spheroid whorls of this period: two of lapis lazuli, a shell-inlaid greenstone or jadeite whorl, and an incised pottery whorl.

Wooden artifacts.—A spear or throwing-stick dart, fire-hardened and sharpened, was found.

Objects of ground stone.—The one artifact of this class found is a flat, circular stone with a beveled edge.

Cloth.—A turbanlike headdress of cotton cloth is the only cloth specimen from this period.

Metal.—There is but a single metal artifact, a part-copper, part-gold mask or face covering.

Ornaments of shell.—These include a necklace, a bracelet, and some miscellaneous finds of *Spondylus pictorum* shell beads. These beads vary greatly in size and shape.

Structures.—No *in situ* walls or floors can be assigned definitely to this period. Dome-shaped adobes, however, were found in a huge White-on-red olla, below 3.50 meters, in Pit IV. It is probable that structures of these small adobes were erected in much the same fashion as in the later periods.

Graves.—Sherds of a coarse-ware White-zoned pottery were used as covers for flexed burials. Grave goods, of pottery and other artifacts, are abundant. Burials are in the natural sand just beneath the rubbish, as a rule, and do not appear to have been very deep.

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Poles may have formed a frame on which to rest the sherd coverings, or they may have been lashed together to form a litter of some sort for the dead. A crude rock vault, or covering of the burial with irregular boulders, is probably another type of grave of the period.

THE INTERMEDIATE PERIOD

The Intermediate period is stratigraphically defined by a zone of transition in the refuse between the lower White-on-red period and the upper Interlocking period. This is marked in Pits IV and VII and implied in the lower half of Pits V and VI.

Pottery.—1. The White-decorated type is markedly on the decline; White-zoned, on the other hand, shows a tendency to increase.

2. The small, necked jar and the large mammiform jar continue through into this period, but the small mammiform jar and the incurved, lipped bowl with a pronounced median ridge have declined.

3. The three-color Interlocking type first appears, in relatively small amounts.

4. The Three-color "Intermediate" type appears.

5. Smooth plain red decreases slightly, and Coarse plain red is on the increase.

6. There are a few sherds of Polished black ware.

Unfired clay vessels.—These objects appear only in rubbish of this period. A few unfired clay fragments from Burial 1, Pit VI, further substantiate their Intermediate period position.

Panpipes.—A three-color fragment of a panpipe and fragments without paint were found in Intermediate period strata. This is the earliest appearance of panpipes at the site.

Figurines or adornos.—There are a human face *adorno* with mutilated nose and an unidentifiable animal head from Intermediate period rubbish. A human figurine or toy came from Burial 1, Pit VI.

Ornaments of shell.—Two beads of small spiral shells occur.

Structures.—The rubble-filled rock wall and adjoining clay floor are, in Pits IV and VII, associated stratigraphically with the Intermediate period. So is a higher thin clay floor situated on a thick mass of clay. A thin clay

floor near the bottom of Pits V and VI can also be related to this period.

Burials.—All of the burials of the Intermediate period are infants or children. Four of these, however, have the coverings of heavy sherds used in the burials of the White-on-red period. Two burials do not have these coverings. The burial position, where determinable, is flexed. White-on-red style pottery and Three-color "Intermediate" type pieces are found as burial furniture. In one instance other artifacts were placed with a burial.

THE INTERLOCKING PERIOD

The Interlocking period refuse is defined as that zone overlying the clay floor at 1.50 meters deep in Pits IV and VII. This checks with the upper half of the rubbish in Pits V and VI.

Pottery.—1. The Interlocking type is the predominant decorated ware, and beaker bowls are most common in this period.

2. Related three-color types also are found in small percentages, tending to be slightly later in the period.

3. Some White-on-red style pottery also is found. Most of this is White-slipped or White-zoned.

4. In plain wares there is a greater occurrence of coarse than of fine pottery.

5. Polished black and incised and hollow-reed punctuated sherds occur in very small amounts.

Panpipes.—Panpipes, which came in during the Intermediate period, are found during Interlocking times. One painted, with a white circle, and unpainted fragments are found in the upper levels of the refuse.

Figurines or adornos.—Fragments of human figurine heads, similar to the one from the White-on-red period, occur. A number of *adorno* fragments, including a mold-made human head, come from doubtful stratigraphic proveniences but may belong to the Interlocking period.

Spindle whorls.—Two pottery disk whorls, a gourd disk whorl, and a bead-shaped whorl of stone were found.

Bone artifacts.—A bone throwing-stick hook occurs in this period.

Wooden artifacts.—There are "plugs" or "tops" of wood.

TABLE 7

PIT IV: POTTERY TYPES BY OCCURRENCE AND PERCENTAGE FOR EACH LEVEL

		Level	Depth (meters)	White-zoned (fine)	White-zoned (coarse)	White-slipped (fine)	White-slipped (coarse)	Three-zoned	Decorated	Circle	Dot	Three-color curved	Linear and naturalistic	X-Marr	Coarse plain red	Negative painted	Misc. decorated	Misc. incised and punctated	Misc. modeled	Polished black	Late Chancay Black-on-white	White-slipped Chancay	Platin ure	Total shards				
1	0-5.0	.2	.001	.001	.003	.008	.024	.003	.003	.29	.4	.25	.14	.3	.1	.0008	.002	.012	.021	.012	.002	.054	.086	.38	4	854	1,169	
2	.50-1.00	.4	.004	.006	.014	.014	.021	.001	.001	.19	.1	.32	.10	.8	.1	.008	.011	.035	.011	.011	.008	.039	.089	.14	1	.003	.73	
3	1.00-1.50	.5	.012	.009	.044	.044	.052	.002	.002	.21	.1	.21	.9	.1	.002	.022	.052	.052	.022	.017	.147	.254	.005	.005	.159	402		
4	1.50-2.00	.1	.002	.002	.007	.017	.045	.017	.017	.7	.18	.5	.8	.1	.002	.012	.012	.012	.012	.012	.045	.102	.007	.005	.005	.396		
5	2.00-2.50	.4	.006	.005	.012	.008	.028	.002	.002	.5	.16	.1	.10	.2	.003	.003	.028	.028	.028	.017	.017	.003	.014	.047	.2	.002	.292	
6	2.50-3.00	.3	.010	.006	.006	.063	.137	.003	.003	.19	.41	.7	.1	.2	.006	.006	.023	.023	.023	.015	.015	.003	.003	.015	.01	.002	.400	
7	3.00-3.50	.5	.019	.007	.003	.103	.235	.011	.011	.27	.62	.3	.4	.2	.007	.007	.015	.015	.015	.003	.003	.003	.003	.003	.003	.003	.003	
8	3.50-4.00	.10	.037	.011	.007	.007	.122	.13	.003	.33	.35	.1	.1	.003	.003	.003	.003	.003	.003	.003	.003	.003	.003	.003	.003	.003		
9	4.00-4.50	.9	.033	.011	.007	.007	.077	.103	.003	.2	.21	.28	.1	.003	.003	.003	.003	.003	.003	.003	.003	.003	.003	.003	.003	.003		
10	4.50-5.00	.2	.029	.014	.014	.014	.145	.104	.104	.1	.1	.10	.1	.003	.003	.003	.003	.003	.003	.003	.003	.003	.003	.003	.003	.003		
11	5.00-5.50	5	.041	.041	.041	.041	.041	.041	.041	.11	.11	.11	.11	.11	.11	.092	.092	.092	.092	.092	.092	.092	.092	.092	.092	.092	.092	.092

TABLE 8
PIT VII: POTTERY TYPES BY OCCURRENCE AND PERCENTAGE FOR EACH LEVEL

Level	Depth (meters)	Three-color curvi-linear and naturalistic										Misc.				Late Chan-	
		White-zoned	White-slipped	Red-on-white	Probable	Dot or	Smooth plain	Coarse plain	Negative painted	Incised and Punc-tated	Polished black	Black-white	White-slipped	Total sherd	Chan-cay on-cay	Late Chan-cay	
1	0-50	.4 .003	11 .009	315 .253	1 .0008	35 .028	15 .012	9 .007	2 .002	1 .0008	119 .096	685 .552	18 .014	7 .006	5 .004	12 .009	1,241
2	.50-75	1 .002	5 .013	80 .213	15 .040	10 .026	2 .005	2 .005	2 .005	56 .149	200 .533	67 .200	148 .445	1 .002	2 .005	1 .002	375
3	.75-1.00	5 .015	83 .249	11 .033	9 .027	3 .009	3 .009	3 .009	3 .009	67 .200	148 .445	6 .018	6 .018	1 .003	1 .003	1 .003	333
4	1.00-1.25	5 .018	1 .003	43 .159	13 .048	5 .018	5 .033	9 .033	9 .033	45 .166	144 .531	1 .003	1 .003	4 .014	4 .014	2 .011	271
5	1.25-1.50	1 .006	2 .011	27 .161	5 .029	5 .029	5 .029	5 .029	5 .029	43 .252	83 .494	1 .003	50 .178	134 .477	2 .007	2 .007	168
6	1.50-1.75	2 .007	2 .007	82 .292	2 .007	5 .007	5 .007	5 .007	5 .007	1 .003	50 .178	1 .003	50 .178	134 .477	2 .007	2 .007	281
7	1.75-2.00	2 .005	12 .034	97 .28	10 .028	10 .028	10 .028	10 .028	10 .028	34 .098	176 .509	1 .002	1 .002	1 .002	2 .005	2 .005	346
8	2.00-2.25	8 .031	3 .011	68 .263	5 .019	5 .019	5 .019	5 .019	5 .019	29 .112	135 .522	5 .019	5 .019	5 .019	5 .019	5 .019	258

TABLE 9
PIT VI: POTTERY TYPES BY OCCURRENCE AND PERCENTAGE FOR EACH LEVEL

TABLE 10
PIT V: POTTERY TYPES BY OCCURRENCE AND PERCENTAGE FOR EACH LEVEL

STRATIGRAPHY AT CERRO DE TRINIDAD

Structures.—Thick, solid adobe walls, walls made of layers of small dome-shaped hand-made adobes, and crude rock walls are all found related to a similar, if not the same, thin clay floor. There is also the possibility of a pyramidal structure topped with a thick adobe platform.

THE LATE CHANCAY PERIOD

This period is represented by the few sherds of the Late Chancay style found in the upper levels of all of the test pits. No structures, burials, or any other features can be identified as belonging to this occupation of the site.

SUMMARY

Site E, on the south slope of Cerro de Trinidad, was inhabited continuously through the White-on-red, Intermediate, and Interlocking periods, in that order. Cultural change, which is mainly reflected in the pottery types, was a gradual process of replacement of the old White-on-red style with the new Interlocking style. Although the White-on-red and Interlocking ceramics are strikingly different in many ways, some features of the Interlocking can be found in the earlier period and have apparently been derived from it. The large mammiform jar, the plate with upturned rim, incurved bowls, and small, necked jars are forms which carry over from the White-on-red style of decoration to the three-color Interlocking decoration. Some types, such as the White-zoned, continue through from early to late, their long span overlapping the shorter spans of more typical White-on-red and Interlocking period forms.

These mixtures are not mechanical and accidental confusions of sherds in the rubbish. In Pits IV and VII the rubbish has been sealed in several places with house floors; and on these floors vessels have been found broken *in situ*. White-zoned type pots were found on floors of the Intermediate and Interlocking period structures, verifying the story of the sherds in the refuse. Graves have also corroborated the continuity of the sequence. Those burials in Pits V and VI, underlying Intermediate period rubbish, showed an assortment of pottery not entirely typical of earlier White-on-red period graves or strata.

The concept of the Intermediate period is of importance only to demonstrate the continuity, transitions, and replacements of pottery styles and artifacts at the site. There is no Intermediate style comparable to either of

the two major styles considered. The Three-color "Intermediate" type, of which few vessels and sherds were found, appears along with White-on-red and Interlocking in the Intermediate period and seems to be a blend of these two traditions. Perhaps it is the attempt of White-on-red period artisans to copy the new and foreign Interlocking style. Most of the sherds of the Three-color "Intermediate" type came from the Intermediate period rubbish zones. There is also a further interest attached to the type. Uhle, in considering transitions from the Interlocking to the White-on-red, the reverse of the stratigraphic sequence presented in this paper, points out what he considers the degeneration of the Interlocking style. To quote that author (Kroeger, 1926b, p. 298):

The elaborate ornaments of the older period [Interlocking] are simplified near the end of the period; animal designs are reduced to simple triangular ornaments; the indications of faces within the triangles gradually disappear; and the last step is reduction in the number of colors used. One can clearly see the results of the progressive conventionalization of the patterns.

It is obvious that Uhle refers to the pottery which has been designated in this report as the Three-color "Intermediate" type. The recent findings would also indicate the transitional position of the type between Interlocking and White-on-red but with a different connotation from that given it by Uhle. Rather than the conventionalization and simplification of a more intricate style, it is more likely the work of artists, trained in simple geometric painting, imitating new and complicated designs.

As the present paper offers a sequence for

Site E which controverts the Uhle sequence, an interpretation to fit the facts which he described is offered. Aside from the fact that Uhle saw what he believed to be strong Nazca influences in the Interlocking style, his principal reason for considering it the earliest culture at the site rests on the discovery of Interlocking style sherds used as covers for burials which had White-on-red vessels in the graves. An occasional Interlocking specimen was also found in some of these graves. The most probable explanation is that some of the graves discovered by Uhle were of the Intermediate and Interlocking periods, as those periods are defined in this report. As the Uhle collection

of "First Period" (Interlocking) pottery numbered over four dozen vessels, it is likely that he found more than an "occasional" piece of the Interlocking. One would expect mixed lots of White-on-red and Interlocking types from graves of either the Intermediate or the Interlocking period. All of the stratigraphic evidence adduced has demonstrated the continuance of White-on-red types through into Interlocking times. It is reasonable to assume that old burial habits also persisted into the Interlocking period, and that Interlocking sherds were used as corpse covers just as the White-on-red fragments had been used in the early period.

TABLE 11
CLASSIFICATION OF THE UHLE CHANCAY COLLECTIONS^a

Figure	Type	Plate 87 (<i>continued</i>)
		Type
10	Interlocking	f White-decorated
11	Interlocking	g White-zoned
12	Circle	h White-decorated
13	Interlocking	i Three-color "Intermediate"
14	Dot	j White-decorated
15	Interlocking	k White-decorated
16	Interlocking	
17	Interlocking	
18	Interlocking	
19	Circle	
20	Interlocking	
21	Three-color curvilinear and naturalistic	
22	Interlocking	
23	Interlocking	
Plate 86		Plate 88
a	White-decorated	a [very Nazcalike]
b	Red-on-white	b Three-color curvilinear and naturalistic
c	White-decorated	c Interlocking
d	White-decorated	d Interlocking
e	White-decorated	e Three-color curvilinear and naturalistic
f	White-decorated	f Three-color curvilinear and naturalistic
g	White-decorated	
Plate 87		Plate 89
a	White-decorated	a Three-color "Intermediate"
b	White-decorated	b [?]
c	White-decorated	c [?]
d	White-decorated	d [probably Smooth plain red]
e	[probably an Intermediate or White-on-red period vessel]	e White-zoned (fine ware)
		f White-zoned (fine ware)
		g Three-color "Intermediate"
		h [?]
		i Interlocking [unusual piece]
Plate 90 [Unusual forms and decoration. It is doubtful, however, if all are of the Interlocking style as assigned by Uhle]		

^a Kroeber, 1926b. These identifications are based upon the drawings and photographs in the publication. The difficulties and hazards in attempting such identifications from pictures are realized by the author.

Baños de Boza

THE SITE

NINE KILOMETERS east-southeast of Cerro de Trinidad, on the southeastern edge of the valley of Pasamayo, are the Boza springs and marshes. The marshes lie in a low sink area at the foot of the Cerros Pasamayo and Redondo. The immediately surrounding flats are now noncultivated lands, but a kilometer to the north and west the irrigated fields of Pasamayo valley begin. A modern resort hotel has been built at the marshes, and a part of these have been cleared to form pools for mineral baths. To the north of the hotel is a large section of the marsh, a dense thicket of cane and rushes. A series of low sand hills extends around the uncleared marsh. Evidences of occupation are on most of the hills, but the greatest concentration of surface remains is on the highest of these, about 200 meters to the northeast of the hotel.

A number of old excavations have been made in this hill about halfway down the slope on all sides. These reveal adobe walls constructed of small, handmade, dome-shaped adobes of the same type as those found at Cerro de Trinidad, Site E. A number of cell-like rooms or tombs are partly visible.¹¹ The holes, about 1.00 meter in depth, also exposed rubbish, ash, pieces of human bone, and sherds, and from all appearances this refuse continued on down for an unknown depth.

Nearly all of the decorated sherds found were of the White-on-red style. To investigate further, excavations were begun here, by the Institute of Andean Research, shortly after the work at Cerro de Trinidad was finished.

EXCAVATIONS

PITS I AND III

On the southwest slope of the central hill, just below some of the exposed adobe walls, two 3-by-3-meter pits were excavated in the undisturbed areas between the old excavations. In Pit I, Level 1, 0-.50 meter deep, there were exposed in the east or uphill face a number of the dome-shaped adobes. These occurred loose in the rubbish, but at the bottom of this level a solid clay floor, .25 meter thick, appeared. Beneath the floor, the second level (.50-1.00 meter deep) was sandy, with only one third as many sherds as in the top level. Near the bottom of the second level a hard layer of darker rubbish encrusted with *salitre*, a salt deposition, was cut through. Sherds were considerably more numerous in this stratum, and 204, the highest occurrence of all levels of the pit, were recorded for the third level, 1.00-1.50 meters below surface. In the southwest corner of this level a large plain

cooking olla, seemingly broken *in situ*, was uncovered. In Level 4, 1.50-2.00 meters deep, a *Spondylus pictorum* shell was found in the southwest corner of the pit. Under the shell were fragments of painted sticks, bits of cloth, and some pieces of red and white mineral paint. Below Level 4 no more sherds or other evidences of human occupation were encountered. A test hole, carried down an additional .50 meter, showed only clean sterile sand.

In Pit III, between .40 and .80 meter deep, a burial covered with half of a large, broken, White-on-red olla was disclosed. The body had been cramped into the tightest possible position and had been wrapped in textiles. The torso and head were bent forward so that the head came to rest between the legs just below the pelvis. A complete White-on-red

¹¹ Villar Cordova, 1935, pp. 244-45. Villar Cordova mentions tombs made of odontiform adobes at a "Boza" site.

bowl and part of a small, plain red open bowl were associated with the burial. In Level 1 of the pit, over 100 sherds were taken from the rubbish; in Level 2, .50-1.00 meter deep, the rubbish was exhausted, and the pit was discontinued.

PIT II

Pit II, another 3-by-3-meter pit, was located about 100 meters north of the central hill of the site. It was situated on one of the sandy ridges which extend out into the flat from the main hill mass. In Level 1, 0-.50 meter deep, a complete White-slipped jar was found in the sand. No floor, house walls, or burial associations were encountered in connection with the find. This level, which consisted of a very sandy midden, had 73 potsherds. In Level 2, .50-1.00 meter deep, the pit ran out into sterile sand. Below .50 meter there was very little refuse discoloration in the sand, and only nine sherds were found.

PIT IV

The fourth pit was excavated into the crown of the central hill of the site, a small flat area less than 10 by 10 meters square. Pit IV was laid out 6 by 3 meters in surface dimensions, with the long axis of the pit oriented north-south.

Level 1, 0-.50 meter deep, was in the upper part composed of loose sand with scattered sherds. At the bottom of the level, covering a clay floor which extended all along the western side of the pit, was a dense layer of ash, dark rubbish, and sherds. Most of the sherds were plain, but some White-on-red decorated pieces were noted. One Interlocking and one black and yellow negative-painted sherd also came from this level.

In Level 2, .50-1.00 meter deep, some human vertebrae were revealed in the northeast corner of the pit. The refuse underneath the clay floor continued sandy as in the first level. Along the east side of the pit the same floor was encountered in this level at a slightly lower depth than it was on the west. Apparently the floor sloped gradually to the east. Also, on the west side of the pit, where the adobe floor was removed, a wall or structure of small, handmade, dome-shaped adobes

showed up at a depth just a little lower than the adobe floor. This wall ran parallel to the west face of the pit and was left in place while the excavation of Levels 3 and 4 (1.00-2.00 meters) was pursued in the eastern two thirds of the pit. There was little change in the nature of the sandy refuse in these levels except that there were more sherds in Levels 3 and 4 than in Level 2.

In Level 4, 1.50-2.00 meters deep, toward the north end of the pit, a second small adobe wall, of the same type as the structure on the west side of the pit, was uncovered. This wall, consisting of only a single tier of the dome-shaped adobes, extended at right angles from the adobe structure on the west and ran the whole width of the north end of the pit, disappearing under the east profile. In the excavation of Level 5, 2.00 to 2.50 meters deep, this wall was removed, and no further evidences of it were found below 2.50 meters. Between 2.25 and 2.50 meters deep, in Level 5, a layer of large irregular rocks was removed. After completion of Level 5, it could be seen in the west profile that this layer of rock had formed the foundation upon which the adobe structure in the west part of the pit had been built. It is possible too that the small adobe wall, running east-west across the pit, had also been related to this stone floor. Below the stone floor or foundation, hard-packed sand and rubbish were exposed through Level 6 down to a depth of 3.00 meters.

The large adobe structure in the western part of Pit IV was evidently a platform. The orientation of the side exposed in the pit was almost magnetic north. The height above the stone floor was about 2.00 meters. The complete extent of the platform to the north, south, and west was unknown, as it extended out of the area of the pit in all these directions. It seems likely that it covered the crown of the hill. A full meter was cut back into the platform in the southwest corner of the pit, revealing adobes set in even rows in mud plaster. Presumably the structure was a solid edifice of the small adobes. The adobe floor at .50 meters deep may have been the surfacing for the platform. Certainly the stone floor served as a base.

In Levels 6 and 7, 2.50 to 3.50 meters deep,

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two restorable vessels were found in the sandy refuse below the stone floor. One of these was a White-on-red bowl, the other a White-slipped jar. Inside one of the vessels were the remains of some sea crustaceans. There were no burials, or fragments of human bone, anywhere in the pit at this depth.

At 3.10 meters below surface, the remnants of another wall, this one of a double tier of the dome-shaped adobes, came to light. This lowest adobe wall extended north and south for the full length of the pit but at a slightly different angle than the adobe platform above. The sand at this depth was much lighter than in the level above, and very few sherds were taken from Level 7, 3.00–3.50 meters deep. At 3.40 meters a floor made of dome-shaped adobes was exposed in the northeastern part of the pit. The floor was a part of the same structure as the lowest adobe wall and was not encountered on the west side of that wall. The orientation of this structure, beneath the stone floor and the adobe platform, is several degrees to the east of north.

Levels 8 and 9, 3.50–4.00 and 4.00–4.50 meters deep, were excavated at the north and south ends of the pit only. A 2-meter strip was left in the middle of the pit at a depth of 3.50 meters to facilitate dirt removal from the two ends. Even with this reduction in the area of the pit there were more sherds from these two levels than from Level 7. No decorated types, other than those of the White-on-red style, were noted. In the north end of the pit the adobe floor and wall were completely removed in Level 8. All sizes of irregular boulders were taken out of Levels 8 and 9 in both the north and south ends of the pit. These may have formed a second rock floor, comparable to the rock floor above, on which the other adobe structures had been erected. Evidence for this was not conclusive, however.

At 4.50 meters deep, the bottom of Level 9, sherds and the organic color in the sand began to disappear. Test holes carried down to 5.00 meters revealed only clean sand, and the excavation was closed.

POTTERY

Vessels.—Seven complete, restorable, or partially restorable vessels were recovered at the Baños de Boza site. Five of these can be classified in the White-on-red style. The other two are plain pieces, closely resembling the type Smooth plain red from Cerro de Trinidad,

Site E. As all of the types found at Boza have been described from Site E, it is not necessary to discuss the Boza pottery at any length.

Table 12 summarizes the seven vessels as to decoration type, form, and provenience.

TABLE 12
POTTERY FROM BAÑOS DE BOZA

Catalogue Number	Type	Form	Provenience
571	White-zoned (fine) (Plate 9e)	I B 1 (bowl, incurved, lipped, no handles)	Pit III, Level 2, associated with Burial 1
577	White-zoned (fine) (Plate 9c)	I B 2 (bowl, incurved, lipped, 2 handles)	Pit IV, Level 6
573	White-zoned (coarse) (Plate 9d)	huge olla	Pit III, Level 2, covering for Burial 1
578	White-slipped (fine) (Plate 9a)	II B 1 (jar, vertical or flaring neck, no handles)	Pit IV, Level 6
568	White-slipped (fine) (Plate 9b)	II B 1 (jar, vertical or flaring neck, no handles)	Pit II, Level 1
570	Smooth plain red (Plate 9f)	I B 2 (bowl, incurved, lipped, 2 handles)	Pit I, Level 3
572	Smooth plain red (Plate 9g)	I A 1 (bowl, low, flaring)	Pit III, Level 2, associated with Burial 1

The two White-zoned incurved bowls are very much like those of the same type from Site E. The bottoms are painted white, though neither of them has the vertical white bands on the upper half of the vessel above the median ridge. The large olla burial cover is estimated at 60 centimeters in height and slightly less in diameter. It has a narrow opening (12.5 centimeters in diameter) and a straight, high collar. The exterior surface is decorated with two broad, horizontal white bands encircling the body.

One of the White-slipped jars is 15.5 centimeters in diameter and 16 centimeters in height. It has a blunted median ridge below the mid-point of its height. The orifice is constricted with an outflared neck 3 centimeters high. The second White-slipped jar is 16.5 centimeters high and 13.5 centimeters in diameter. Maximum diameter is slightly above the vertical mid-point. It has a very small, straight neck, less than one centimeter high.

The large incurved bowl of the Smooth plain red type is 32 centimeters in diameter and 22.5 centimeters in height. It has rounded walls rather than a pronounced median ridge. The horizontal strap handles are just above the bulge. The vessel is heavily coated with soot. The little open bowl of this same type is

a well-made piece slipped on both surfaces. It is 16 centimeters in diameter and 9 centimeters high. Only about three fifths of the vessel was recovered.

Sherds.—All of the White-on-red style types¹² were found as sherds (Plate 5Bm-s, 5Bv-y) at Boza. Smooth plain red was also plentiful and some Coarse plain red was present. A few Polished black ware sherds, one Interlocking type sherd with a nested chevron body design (Fig. 7f), one Negative painted style sherd (Fig. 7d), and two Incised and punctated sherds (Plate 5Bt, 5Bu) represented the other types.

Pit IV, the only excavation of any depth, shows few, if any, stratigraphic changes in the percentages of the White-on-red types. Polished black ware is absent in the lower levels, a resemblance to the deep pits at Site E. The overwhelming superiority in the amount of Smooth plain red over Coarse plain red in this "pure" White-on-red style site is in accord with the appearance of the Smooth plain red in greater frequency in the White-on-red period at Site E. Finally, the occurrence of only one Interlocking sherd at the site, and that in the top level of Pit IV, concurs with the other data in placing Baños de Boza as a site of the White-on-red period.¹³

ARTIFACTS

A bone awl or punch made from a splinter of animal bone was found in Pit IV, Level 2, .50-1.00 meter deep. This object is 1.5 centimeters wide at the base and 10.5 centimeters long and tapers to a round, sharp point.

The only other artifacts recovered were the

Spondylus pictorum shell and small cache of painted sticks, shreds of cloth, and mineral pigments, all found together in Pit I, Level 4, 1.50 to 2.00 meters deep. The shell appears to have been ground and polished on the outer surface.

SUMMARY

The importance of the Baños de Boza site is that it represents a single occupation of the White-on-red period in the Chancay valley. The site cross-dates with the lowest levels of Pits IV and VII at Cerro de Trinidad, Site E. Only those minor types found in White-on-red period levels at Site E, such as Polished black, Negative painted, and Incised and punctated are associated with the White-on-red style at

Boza. The one burial found at Boza checks with those of the early period at Site E. It was in a shallow grave; thick White-on-red

¹² This omits the Combination white-red decorated type, of which only one specimen was found at Site E.

¹³ On the south slope of the central hill the author found one sherd of Late Chancay style near some opened graves. These graves were shallow and cane-roofed, typical of the late graves of the valley. It is quite possible that Late Chancay people used these hills as a burial

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sherds covered the body; the burial was tightly flexed; and the grave offerings were vessels of the White-on-red style.

At Cerro de Trinidad, Site E, the only evidence for the use of the small, handmade, dome-shaped adobes in the White-on-red period was the finding of these in a large olla buried in refuse of this period. Excava-

ground. The cook at the Boza Hotel showed the author two vessels, late in appearance, which he said came from shallow graves at the site.

tion at Boza revealed not only small walls of these adobes, in connection with clay floors, but a large solid platform constructed of this type of building material. It is possible that this platform was a base for a religious or otherwise centrally important structure at the site. Judging from the two sites, Cerro de Trinidad and Baños de Boza, the dome-shaped adobes were used in construction throughout the White-on-red and Interlocking periods in the Chancay valley.

Conclusions: Comparisons and Sequence

THE EARLY PERIOD SEQUENCE IN THE CHANCAY VALLEY

DURING the Early or pre-Tiahuanacoid Period in the Chancay valley, two cultures, denoted by their peculiar ceramic styles, were flourishing. These were the White-on-red and the Interlocking. At Cerro de Trinidad, Site E, where Uhle first discovered these pottery styles, the recent stratigraphic excavations show the White-on-red to be the earlier of the two. This earlier occupation at the site has been termed the White-on-red period of the Chancay valley. Nine kilometers to the southeast of the Cerro de Trinidad, at Baños de Boza, there is another site of the White-on-red period without the admixture and overlay of the Interlocking style.

At Cerro de Trinidad, Site E, the Interlocking style replaced the White-on-red style. The process of this replacement was a slow one. This statement is borne out by the fact that there is an Intermediate period at Site E during which the Interlocking decorative techniques and Interlocking style forms were being introduced. White-on-red ceramic ideas persisted through this Intermediate period and are observed in the pottery of the Interlocking period. The cultural continuity in the Chancay between the White-on-red and Interlocking periods is also exemplified in a few other types of artifacts, in similarities of structures, and possibly in similarity of burial.

A number of substyles of the Interlocking appear to be slightly later introductions into

the sequence at the site, following the Interlocking type proper. As will be discussed below, these substyles, or types of the Interlocking style, play a part in relating the Early Period of the Chancay valley to the cultures of the Rimac and those even farther south.

In the stratigraphy at Site E, Late Chancay sherds were found, superficially, but no Black, white, and red geometric or Epigonal fragments were recovered. The close stylistic interrelationships of Late Chancay, Black, white, and red, and Epigonal have been remarked upon from the Chancay valley (Kroeber, 1926b, p.273) and from other regions (Strong, 1925; Willey, present volume, Part 4) of the coast. These three periods seem well knit into a sequence, beginning with Epigonal; hence, the appearance of Late Chancay pottery in the upper levels at Site E must represent a reoccupation of the site in the Late Period, after an interval to allow for the popularity and decline of the Epigonal and Black, white, and red styles in the valley.

The stratification at Site E is based upon two deep pits which were excavated contiguously to form one large pit. There are also incidences of verification in other pits at Site E and in one of the pits at Baños de Boza. Although such evidence is not incontrovertible, the physical conditions in the principal pits at Site E were very reliable for stratigraphic testing and the results have a high degree of probability.

INCISED POTTERY OF THE CENTRAL COAST

Before discussing comparisons of the White-on-red or Interlocking with other styles, it is necessary to review the problem of incised pottery for the central coast. The whole matter of comparative sequences for the Early

Period is bound up with the various occurrences of this kind of decorated ware.

There are two major styles of incised pottery in the region. The first, the Early Ancon-Supe shell-mound variety, is known from

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Puerto de Supe (Kroeker, 1925b, pp. 254-56 and appendix by Uhle, pp. 260-63) in the north to Chilca,¹⁴ below Pachacamac, in the south. Actually its distribution is probably much greater in both directions on the coast as well as inland. The coastal sites, since Uhle's first work, have been thought of as the remains of a "primitive" fisherfolk. This depends upon the definition of the term "primitive," but, as Uhle pointed out (Uhle, 1912; Kroeker, 1925b, p. 263) and as recent excavations of the Institute of Andean Research¹⁵ have corroborated, the people who lived at these sites possessed agriculture, textiles, and advanced skills in bone carving and pottery making. Recent excavations at these sites in Supe and Ancon revealed hammered gold ornaments and carefully polished pyrites mirrors.

At Supe and Chilca, incised decorated ware is relatively scarce and a medium-thick plain ware prevails. However, decorated material was fairly plentiful at Ancon. Most of the sherds from this site are not crudely decorated but have a sculptured quality to the incising and designs, which are well conceived. The recent excavations in the shell mounds at Ancon by the Institute of Andean Research yielded a number of excellent fragments, including a part of a "cat face" and an ornately decorated stirrup-spout fragment. The Chavín similarities of this coastal incised ware have been pointed out by Tello and others. The recent publication of Rafael Larco Hoyle (Larco Hoyle, 1941), of Chiclín, on the Cupisnique (or Chavín B) culture of the north coast discloses the striking similarities of the Ancon-Supe ware with that of the north; and lately, Dr. W. C. Bennett (Bennett, 1939, p. 131, footnote) has found incised pottery, very similar to that of Ancon, at the Chavín site.

The Ancon-Supe Incised pottery is usually decorated with deep, broad, groovelike incised lines. Some incising is fine lined, but this is in the minority. Curvilinear motifs and elements outnumber rectilinear ones. Dot punctations and fine notched rocker-stamping is

frequently used as a filler or background for incised designs. Black smoothed or polished ware is as common as red ware, and black fire-mottling on red is not unusual. Shapes are flattened globular bowls with thickened "comma-shaped" rims, noted by Uhle (1908, p. 355) in connection with the type; shallow and medium-deep bowls with outsloped sides; bottles with ridged lips; and, as mentioned, stirrup-spouted vessels.

The chronological position of the type on the central coast has always been considered early (Uhle, 1912; Strong, 1925). This was based not upon stratigraphic position but upon the uniqueness of the style as set against the background of the known archeology of the immediate region. Overlapping stylistic sequences, as at Ancon or Supe, never show this incised type in association with any period. In the north the superposition of Early Chimú or Mochica graves over Cupisnique graves (Larco Hoyle, 1941, pp. 249-50 and Fig. 321) has provided additional evidence of the antiquity of a generic "Early Incised" type. Bennett's Chavín excavations and Tello's recent work (Tello, personal communication) at that site and at Casma demonstrate the wide distribution of such a type and increase the probability of an early incised pottery horizon for Peru. But for the central coast, at present, its claim to priority must still rest upon its clear-cut cultural isolation.

The other type of incised pottery on the central coast is that type included by Strong (1925, p. 149 and Plate 47a, 47e, 47j-o) in his Middle Ancon I period from the Ancon Necropolis. Decoration of this type is also by scoring with deep, groovelike incised lines and the use of dot punctations. Middle Ancon I Incised, however, is predominantly rectilinear and much more restricted in design motifs than the Ancon-Supe style. A crenelated or zigzag incised border is the most common design. Bowls with incurved sides and with outsloping sides occur as in the Early Ancon-Supe Incised, but a very frequent form is a small-mouthed jar with a swollen neck. On this form the incised designs are placed around the neck swelling. Strap handles on jars and bowls are also noted, and the face-spout makes its appearance. Strong (1925, pp. 148, 183 and

¹⁴ Surface collection made by writer and personal communication with Tello and Kroeker.

¹⁵ Excavations conducted by the writer, to be reported upon at a future date.

Figs. 6, 7) has considered the possibility of a developmental sequence from Early Ancon-Supe into Middle Ancon I; but, except for the technique of incising and the bowl forms, there seems little to warrant a very immediate connection. This is not a denial of the importance of the technique of incised ornamentation of pottery, which seems to the writer to be of great value in tracing historical relationships in an area where almost all ornamentation is by painting or modeling. Rather, the dissimilarities of the two styles argue for the presence, somewhere, of missing stages in this development.

Middle Ancon I Incised is found at Ancon in grave association with coastal Tiahuanaco, Epigonal, Early Lima, Nazcoid, and Early Chimulike pieces. The relief-decorated red ware of the northern Middle Period is also an increment in these collections. This is the only good evidence for the chronological position of this incised type. In the Chancay valley it is found at two important sites on the north side of that valley, Teatino and Doña María. At Teatino, Tello places it as the earliest horizon at the site, equating it with what he considers the widespread sub-Chavín manifestation (Tello, personal communication).

The incised sherds which the writer has seen in surface collections from Teatino are typically of the Middle Ancon I variety. Other surface fragments from the site include Late Chancay Black-on-white, Epigonal, Middle Period relief-decorated ware, and one piece with a triangular Early Lima design executed in large white dots. The site obviously covers a long time-span, but, judging from the relatively small collections observed, it would date no earlier than Middle Ancon I. The incised collection inspected from Doña María was more ample than that from Teatino and included a face-spout with incised decorations about the neck. The other sherds from Doña María checked very closely with Teatino, ranging in time from Epigonal and the relief-decorated ware upward.

The rather small, amorphous collection of incised and punctated sherds from the stratigraphic pits at Cerro de Trinidad, Site E, and Baños de Boza do not compare very favorably with either Early Ancon-Supe Incised or with Middle Ancon I Incised. Most certainly none is of the earlier style. One spout sherd, with an incised and punctated border around a swollen neck, suggests Middle Ancon I. This fragment came from an upper level in the Interlocking period.

COMPARISONS: THE WHITE-ON-RED STYLE

The singularity of this style, especially as it is expressed in the White-decorated type, has been commented upon. There appear to be no similar styles described for the Peruvian coast. Uhle (1908, pp. 352-53) has compared it to the Early Ancon-Supe Incised, out of which he considered it had developed but, like Kroeber (1926b, p. 284), the present writer can see no specific resemblances. The simple, careless designs of the White-on-red are, if anything, more like those of Middle Ancon I than Early Ancon-Supe. The curvilinear motifs, the sureness, and the great amount of design variation that characterize the incised pottery of the shell mounds are completely lacking. In form, the incurved, or flattened globular, bowl is common to White-on-red and Early Ancon-Supe, as well as Middle Ancon I; but this is an extremely simple shape,

and in rim modifications and proportions there are differences.

Kroeber (1926b, p. 286; 1925b, pp. 242-43) has suggested resemblances between the White-on-red of Chancay and a White-on-red of Middle Ancon II and Middle Supe. The White-on-red collection of Middle Ancon II, judging from illustrations (Strong, 1925, Plates 44, 45), is largely made up of small-mouthed jars, many with swollen necks, which have vertically placed handles on the sides or joining the sides with the neck. Decorations are white bands extending vertically down the vessel walls. Quite often, wavy lines alternate with the straight vertical bands. The red finish of the vessels is usually dull and coarse. None of these features, except the vertical white bands of decoration, is found in the Chancay White-on-red style. Typical Chancay

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White-on-red handles are horizontally placed. The large, narrow-mouthed jar with vertical handles, or "pitcher" (Strong, 1925, Plate 44d, is a good example), is not a Chancay White-on-red form but appears for the first time on the central coast in Middle Period contexts, associated with Epigonal influences.

Most of the vessels shown by Kroeber (1925b, Plates 72a, 72f, 73i, 73j, 77d, 78f, 78g) as possibly representing an old central coastal White-on-red strain at Supe (San Nicolas) appear to the present writer to be more closely related to Epigonal in form and design. This alternative is considered by Kroeber (1925b, p. 243), and his point that old central coastal ceramic habits of a red ground color and simple painting may have continued incorporated with Epigonal traits seems a likely hypothesis to explain the abundance of White-on-red ware in the Middle Period. This sort of a removed and indirect relationship between Chancay White-on-red and the later Middle Period White-on-red of Supe and Ancón appears most in accord with the facts of style and sequence.

Farther afield than the central coast, there is, to the writer's knowledge, nothing comparable to the White-on-red in the south. The trait of nose mutilation, noted on *adornos* or

figurines at Site E, is widely known in the north in Early Chimu portraiture, but such a parallel could easily be derived from widespread customs of punishment rather than common origins of art forms. In the Chicama valley, Larco Hoyle has defined a culture period, "Salinar" (1941, pp. 249-50 and Fig. 327, bottom row). According to that writer, its position is intermediate between Cupisnique (Chavín B) and Mochica (Early Chimu). The very brief description and photographs now in print on "Salinar" suggest similarities to the White-on-red of Chancay. This comparison is put forward cautiously, until more data on this new culture of the north are published.

Most interesting of all, Bennett (personal communication, April, 1942) has found graves at Chavín de Huantar containing White-on-red pottery. He notes one instance of a similar grave in a site near Huaraz. This White-on-red material from the north highlands of Peru is not identical with the White-on-red of the Chancay (Bennett, personal communication, April, 1942), but relationship is indicated in features of shape and surface decoration. At Chavín, White-on-red graves were intrusive into Chavín refuse, appearing to be clearly later in time than the incised ware.

COMPARISONS: THE NEGATIVE PAINTED STYLE

Negative painted sherds were found in White-on-red period rubbish in both of the Chancay valley sites excavated. In color and general appearance they have their closest similarity to Negative painted sherds recently found by Strong (personal communication) at

Pachacamac. Here they were found in refuse levels mixed with pottery of the Interlocking style and an occasional sherd of White-on-red. There is a similarity between the Chancay and Pachacamac Negative painted and the two-color Negative painted pottery of Recuay.

COMPARISONS: THE INTERLOCKING STYLE

In the Chancay valley the Interlocking style, to the writer's knowledge, is found in quantity only at Site E and on some of the rock-covered hills near that site. At La Calera de Jecuan, Uhle's Site C of the Chancay (Kroeber, 1926b, pp. 267, 293-94), the present writer found two sherds, badly weathered, which have boldly painted Interlocking designs. Site C, as described by Uhle, and as recent surface collections attest, was a cemetery with Epig-

onal, Black, white, and red, and Late Chancay pottery. Uhle found no Interlocking in the graves.

At Site E, the Interlocking appears rather abruptly in conjunction with the earlier White-on-red style. We have traced certain forms from the earlier to the later period at Site E, but the three-color designs of the stylized fish or serpent are clearly different from and foreign to the simple geometric pat-

terns of the White-on-red. Origins of the Interlocking style of design are virtually impossible to determine with the present information at hand for comparisons. Uhle believed it to be an Early Nazca strain which was imported from the south into the central coast. The occurrence of the interlocking fish design in Nazca, as Kroeber (1926b, p. 287) has stated, is as a very minor element in that style. For the earliest division of the Nazca style, Nazca A, Gayton and Kroeber (1927, p. 17) list no occurrences of the interlocking fish pattern. For Nazca X there is one; and for Nazca B, the later Nazca phase, there are nine occurrences. When the interlocking fish does occur, as on the Nazca B vessels shown by Uhle (1908, Fig. 7) to demonstrate this point, it has been changed from the sharply rectilinear interlocking fish of the Chancay. The body serrations are rounded and the eye treatment is not the same. Kroeber (1930b, p. 15) sums up the interlocking fish in the Nazca style by saying: "As a matter of fact, the angular interlocking fish pattern in two complementary colors is of generic textile design character, and seems rather out of keeping in the general style of Nazca, which is curvilinear and polychrome; it looks like an alien element injected into it." Thus, it is more probable that the interlocking fish design moved into Nazca from the central coast, or into both areas from a third source, than that it originated in Nazca.

The one really typical Nazca vessel (Kroeber, 1926b, Plate 88a) in the Uhle collections from Chancay is a double-spouted jar with a curvilinear, noninterlocked fish design. The form of this vessel, with small, parallel spouts, is the form of Nazca A; and the curvilinear or relatively naturalistic fish is, according to Gayton and Kroeber (1927, pp. 14, 19 and Table 1) most common in Nazca A and Nazca X, not in later Nazca B. As no grave association data are available for the Uhle Site E collection, it is impossible to relate this vessel with the White-on-red, Intermediate, or Interlocking periods, but it would appear that Nazca A and Nazca X ceramic traits were entering the Chancay valley previous to the arrival of the interlocking fish designs in Nazca B. A second Nazcoid vessel (Kroeber, 1926b, Plate

120b) from Uhle's Site E collection gives a further basis for correlations with the south. This vessel is a head-and-spout effigy decorated with rows of white, and probably red, circles on a dark ground. The head and spout is a Nazca B form (Gayton and Kroeber, 1927, pp. 14 ff. and Table 1), and the use of white circles for body decoration is most common in Nazca Y (Gayton and Kroeber, 1927, pp. 26 ff. and Plates 14b, 15d, 17d). The provenience of this particular piece in Site E cannot be known, but the Circle type of the Interlocking style, in stratigraphic Pits IV and VII, has an upper or late Interlocking frequency. The Dot and X-mark types, mainly occurring in later Chancay Interlocking, are types which also relate Interlocking to late Nazca Y (Gayton and Kroeber, 1927, Plates 12b, 15f, 16d, 17e).

There are significant resemblances between Interlocking and the Early Lima style of the Rimac valley. The best description of the pottery of Early Lima is by Gayton (1927) on the Nievería site collection. That author breaks the style down into four strains, A, B, C, and D. Her A and B strains refer to two groups of vessels. The A's are simple in form, coarse in ware, and restricted to three colors, red, white, and black. The B's have a greater range in form, including a jar with long tapering spout and tubular handle and a double-spouted jar. An orange-red slip with decoration in dark red, white, and black is usual. Strain C, a type of design, is found in A and B vessels. It refers to the use of the interlocking fish pattern in vessel decoration. Actually, it occurs on only a relatively small percentage of the Early Lima collections from Nievería. Strain D is close to B in fine ware quality but is devoted to animal and human figure modeling, suggesting Early Chimú influence. Other foreign influences are Tiahuanacoid, as seen in the actual designs and in the double, divergent-spouted jars, and Nazca Y. The Nazca Y and Early Chimulike pieces in the Nievería collections are without grave provenience, however.

Gayton's conclusions (Gayton, 1927, pp. 326-27) are that the Nazca Y and Early Chimoid vessels are probably the earliest. The four strains of Early Lima, together with

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Tiahuanacoid, she groups as coeval and later. Uhle (1908, pp. 362 ff.), on the other hand, on the basis of excavations in the Rimac valley,¹⁶ maintained that Early Lima immediately preceded, and only in its later phases was influenced by, Tiahuanacoid. He cites excavation in an adobe mound in which he found an abandoned storehouse filled with sherds decorated with a variant of the interlocking fish design. On top of this mound he found fragments of Tiahuanacoid vessels; however, his exposition of the actual stratigraphic relationship is not clear. Again, he states that at Nievería (Uhle, 1908, p. 367) he discovered graves of flexed individuals, accompanied by both Tiahuanacoid and Early Lima style pottery, which were intrusive in graves with typical Early Lima extended burials and Early Lima pottery.

Without data of stratigraphy or better grave association, the factoring out of the various strains of Early Lima can never be satisfactorily accomplished. However, viewed in the light of the new Chancay and Pachacamac data, the present writer is inclined to agree with Uhle's interpretation. A certain increment of Early Lima is probably earlier and pre-Tiahuanacoid, and this increment is represented by those vessels which are nearest the Chancay Interlocking style. These have textile-type fish designs,¹⁷ greatly reduced and simplified. Forms in Early Lima, like the large mammiiform jar (Gayton, 1927, Plate 91e), bear out this relationship to the earlier style. The use of circles and dots to compose interlocking fish designs, triangles, and bands is very common in Early Lima (Uhle, 1908, Fig. 14; Gayton, 1927, Plates 91a, 91f, 92c, 92d, 93g, 93j-l, 94a, 94c, 94e, 94i, 94l, 95e, 96d, 96j). As emphasized in discussing Nazcoid affinities to the Interlocking style, circles and dots are minor elements at Site E, coming in near the end of the occupation at the site.

Chancay Interlocking is more homogeneous and unified as a style; Early Lima contains a number of dissimilar strains, some of which

can be traced, historically, to several foreign styles. A part, or the later half, of Early Lima is Tiahuanacoid-influenced. There is no evidence of this in the Chancay Interlocking. The Uhle Chancay collection of the Interlocking style shows no typical Early Lima vessels.

At the beginning of the Middle Period, at a point in time marked by Early Lima and Middle Ancon I, there was a convergence of many strains and styles on the central coast. Nazca Y, Early Chimu, and Tiahuanacoid merged with the local cultures. At Ancon this local style was the Middle Ancon I type of incised ware; in the Rimac it was the Early Lima style. There are Early Lima pieces (Strong, 1925, Plate 46i, 46k; Uhle, 1912, discussion of "Oldest Part of Later Ancon") from Middle Ancon I graves to further cement the chronological tie-up of Middle Ancon I and Early Lima. There are no typical Chancay Interlocking vessels from Middle Ancon I or Early Lima. The valley of Chancay may have been in a cultural backwater, non-influencing and by-passed by outer influences during this time of excessive importation of new pottery ideas to the central coast, but it seems more likely that the Interlocking at Site E, in the Chancay, existed prior to this stylistically confused era.

With regard to the dot, circle, and X-mark elements, these appear in Tiahuanacoid-influenced ware in the south, on the central coast (Schmidt, 1929, pp. 269, 273 [upper and lower right], 288, 294), and circles are used in the Classic Tiahuanaco from the highland type site (Bennett, 1934, p. 401). All of the elements are simple and common ones, but their use in certain associations, at this particular point in the coastal sequence, is significant for the solution of problems of relationship. They occur in the south at a time when Tiahuanacoid influences were first penetrating to that region, in the Nazca Y period. On the central coast they are typical of Early Lima, a period of many innovations and introductions in pottery decoration. At Chancay they seem to herald the changes that were later to take place in the Rimac. Perhaps these elements come with the Tiahuanacoid and register its first impressions on

¹⁶ Kroeber, 1926c, pp. 336-37. This is Aramburú, mound 16, at which Kroeber later found superposition of Sub-Chancay over Early Lima.

¹⁷ Gayton, 1927, Plates 93h, 95a, 95c; also specimens in the National Museum, Lima, Peru.

the coast; perhaps they are locally developed, centrally or in the south; but they are among the definitive traits of Early to Middle Period transition.

These comparisons to Interlocking, although of correlative value, do not clarify the problem of its origins or center of distribution. Sporadically, the interlocking fish or snake design is spread as far as Oaxaca, Mexico, and, as Lothrop and others have pointed out (Lothrop, 1940, p. 426; Kidder II, 1940, p. 447), is probably a basic American art concept. More specifically, we can summarize the distribution for Peru by mentioning those occurrences which deal with an expression of the design reasonably similar to the Chancay pattern.

In the Middle Cañete culture (Kroeber, 1937, Plates 75, Fig. 7; 77, Fig. 1) of that valley there are a few occurrences of a clearly related interlocking fish design. At Pachacamac, Strong and Corbett have discovered (see this volume, Part 2) a pottery horizon which is probably the closest analogue to the Chancay Interlocking. Tiahuanacoid influences, known from Uhle's excavations for Pachacamac, are not present in this Pachacamac Interlocking.

North of Chancay, Tello (personal communication) reports the style in the Huaura valley but from no farther north on the coast. In the style of Recuay, from the Callejón de Huaylas, the interlocking fish design appears again.¹⁸ This time it is on vessel forms of an obviously different ancestry and is executed in red and black on a cream-colored background rather than in black and white on red. However, the delineation of the interlocking fish in Recuay is closer to the Chancay mode than are the Nazca or Cañete fish decorations. Tello¹⁹ sees this as another manifestation of a fundamental highland influence, comparable to, but different from, the Tiahuanacoid, which spread into the Callejón and onto the central coast at about the same time. He relates these influences to a center in the Montaña regions which he calls "Mantaro." As a textile design, it was spread to a number of different regions where it was modified for pottery decoration. Such a theory is plausible if, as yet, unproved. Certainly on the coast there are no obvious origins for the interlocking fish. Work in the Montaña regions may illuminate this as well as many other problems of Peruvian archeology.

A CULTURE SEQUENCE FOR THE CENTRAL COAST

The schematic presentation of a culture sequence for the central coast of Peru on page 196 below is given for comparison. The greater part of the scheme has been implied before by Uhle, Kroeber, and others. There are no important revisions from the Middle Period upward. Contrary to generally accepted opinion, Early Lima has been moved downward to coincide with Uhle's interpretation of the Rimac material. Strong's work has demonstrated an Interlocking period for Pachacamac. A subsequent Early Lima for that site is postulated as an intermediate stage between Interlocking and Tiahuanaco-Epigonal. This seems justified, as a number of Early Lima vessels, illustrated in the literature (Gayton, 1927, Plate 97; Schmidt, 1929, pp. 272, 274), have come from Pachacamac.

Middle Ancon I is best equated with Tiahuanacoid, as is customary, although the presence of what may be an old local type, the

Middle Ancon I Incised, plus Nazcoid, Early Chimoid, and Early Lima ware, may indicate a further extension back in time. The possibility of a continuity of incised pottery throughout the entire Early Period at Ancon, as Strong has argued, is not disproved. The occurrence of pre-Tiahuanacoid horizons both south and north of Ancon, at Pachacamac, and in the Chancay, without the same Early Period styles showing at Ancon, is peculiar. Future excavation at Ancon may explain this situation. Middle Ancon I Incised occurs in the Chancay at Teatino and Doña María.

Tiahuanaco and Epigonal are lumped together at Supe (San Nicolas) along with the relief-decorated ware and Kroeber's postulated "Middle" Chimu pottery.

¹⁸ Schmidt, 1929, pp. 232 (left), 233 (right), 241; specimens in the National Museum of Lima, Peru.

¹⁹ Personal communication. Lehmann and Doering, 1926, relate the fish or snake design of Chancay to that of Recuay (see chart, p. 40).

CONCLUSIONS

TABLE 13
CULTURE SEQUENCE FOR THE CENTRAL COAST OF PERU^a

	SUPE	CHANCAY	ANCON	LIMA	PACHACAMAC
<i>Major Periods</i>					
LATE II	Inca		Inca		Inca
LATE I	Late Chimu	Late Chancay B-W-R ^b	Late Ancon II Late Ancon I	Sub-Chancay	Sub-Chancay B-W-R ^b
MIDDLE	(Epigonal, Tiahuanaco, and other San Nicolas Middle Styles)	Epigonal	Middle Ancon II Middle Ancon I	Epigonal	Epigonal
EARLY		Middle Ancon I	?	Early Lima	Early Lima Interlocking
"SHELL-MOUNDS"	Early Incised		Early Incised	Early Incised	
		Interlocking Intermediate White-on-red			

^a Sources: Supe, Kroeber, 1925b; Chancay, Kroeber, 1926b and present work; Ancon, Strong, 1925; Lima, Uhle, 1908, 1912; Gayton, 1927; Kroeber, 1926c; Pachacamac, Uhle, 1903; Strong and Corbett, present volume, Part 2.

^b Black, white, and red geometric.

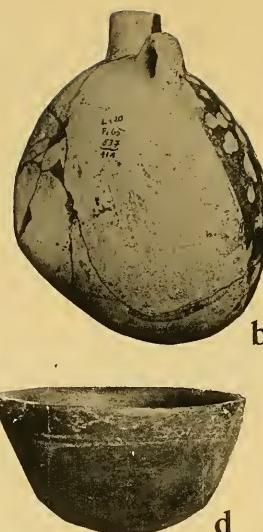
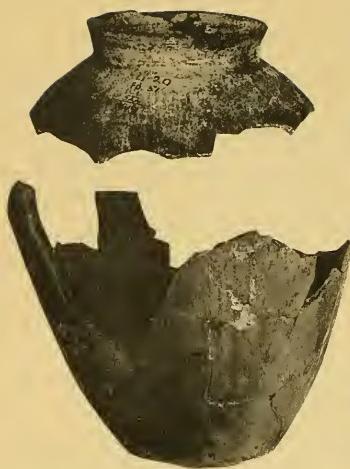
Interlocking is placed in the Early Period in accordance with the foregoing arguments. The Intermediate period and White-on-red period of Chancay precede Interlocking as the result of the stratigraphic tests. The Ancon-Supe Incised ware of the shell mounds is in a tentative and unproved, but likely, position as "pre-Early." The Early Incised site in the Lima column is the Bella Vista site (Uhle, 1908, 1912) on the sea near Callao.

Early Period connections to the north and south place Nazca Y, and perhaps Early Chimu, influence most conveniently in line with Early Lima. Nazca B and perhaps Nazca

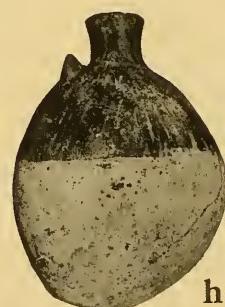
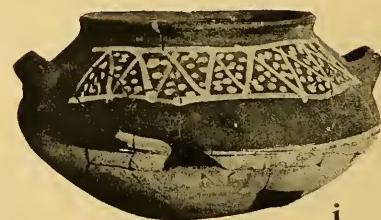
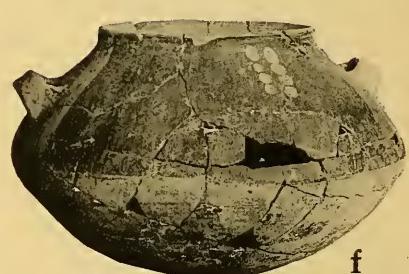
Y are likely correlations with Interlocking. Nazca A would immediately precede Interlocking. These equations with Nazca are, of course, most tentative. The small amount of data for the correlations has been considered in detail. It may be that we are attributing too great an antiquity to the early cultures of the Chancay. On the other hand, Early Nazca and Early Chimu, because of their artistic prominence, may have too long obscured the fact that flourishing on the central coast in the Early Period were cultures coeval with their archeologically more noted neighbors to the north and south.



PLATE 1. WHITE-ON-RED STYLE POTTERY FROM SITE E
a, b, d, e, f, White-decorated; c, Combination white and red decorated; g-j, White-zoned



- 20 CMS -



- 20 CMS -

PLATE 2. WHITE-ON-RED STYLE POTTERY FROM SITE E
b, c, d, f, i, White-decorated; a, e, h, White-zoned; g, White-slipped (coarse ware)

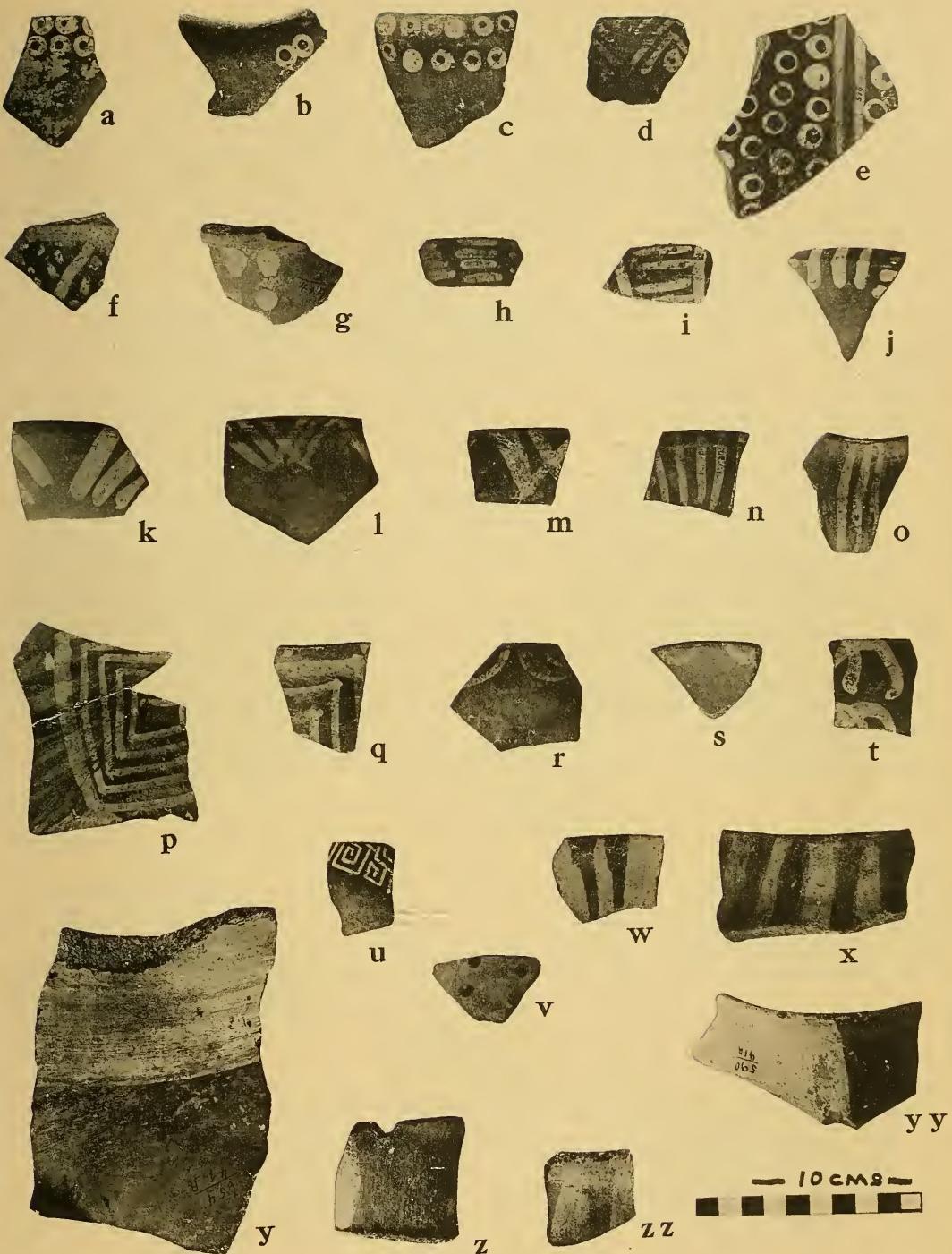


PLATE 3. WHITE-ON-RED STYLE SHERDS FROM SITE E
 a-u, White-decorated; v, w, x, Red-on-white; y, zz, White-zoned (coarse ware); z, yy,
 White-zoned (fine ware)

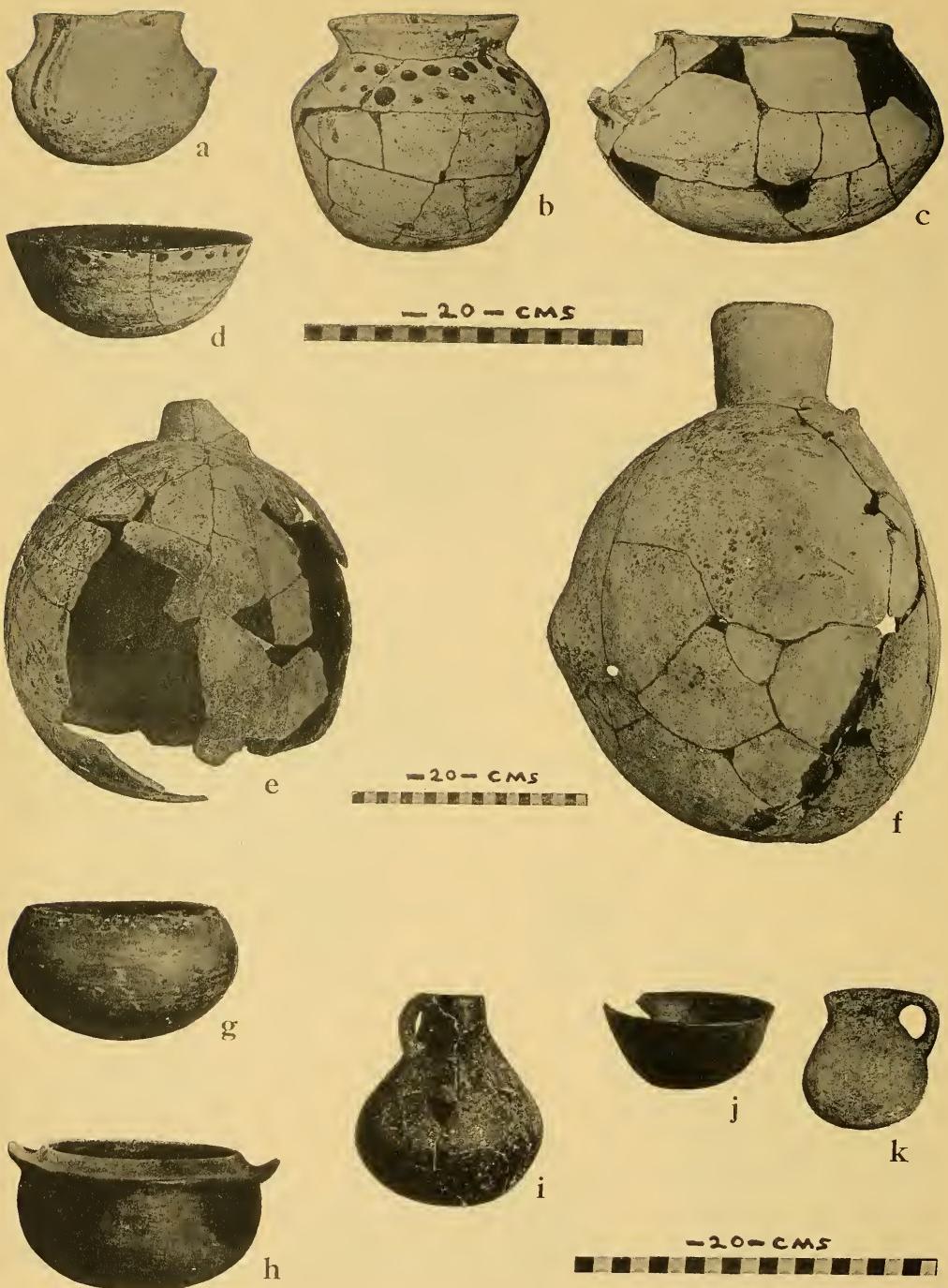


PLATE 4. WHITE-ON-RED AND PLAIN RED POTTERY FROM SITE E
 a, b, d, Red-on-white; c, f, White-slipped (fine ware); e, White-zoned (fine ware);
 g-j, Smooth Plain red; k, Coarse Plain red

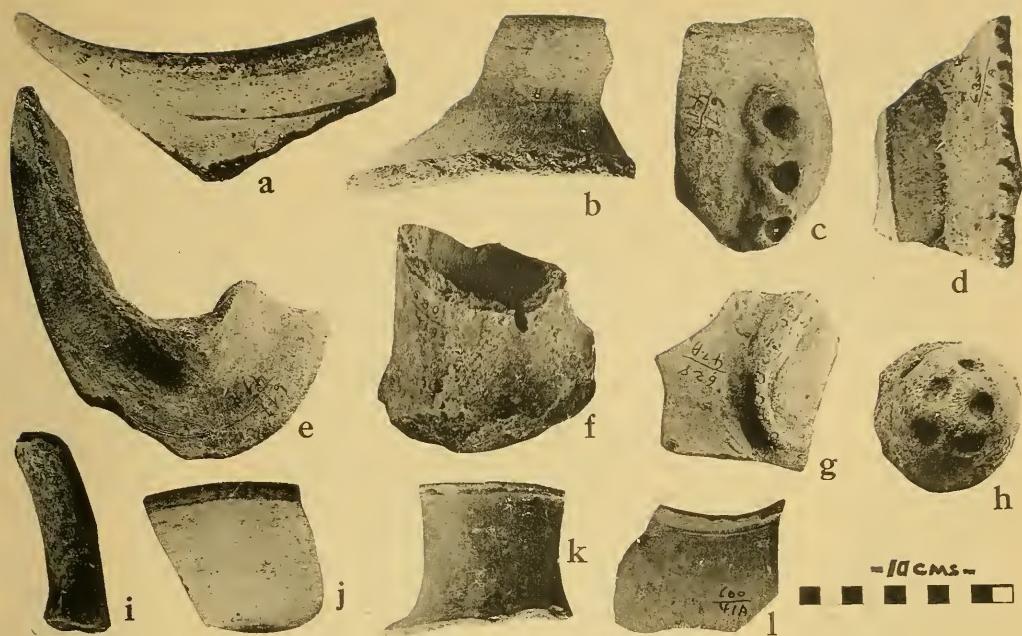


PLATE 5a. WHITE-ON-RED AND PLAIN POTTERY FROM SITE E
a-h, White-slipped (coarse ware); i, j, White-slipped (fine ware); k, l, Smooth Plain red

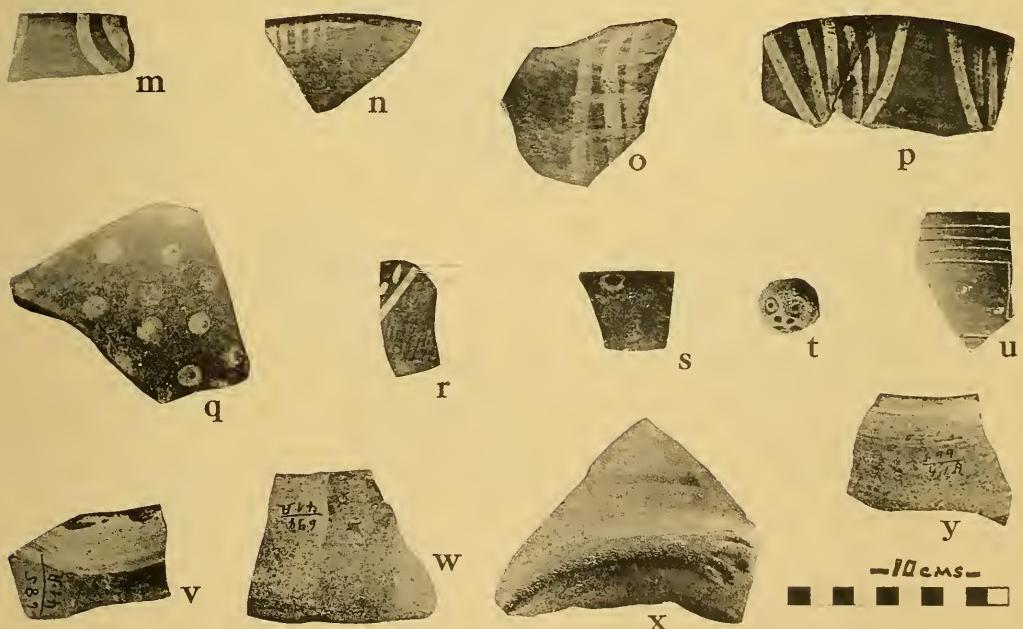


PLATE 5b. SHERDS FROM BAÑOS DE BOZA
m-s, White-decorated; t, incised *adorno*; u, incised sherd; v, White-zoned (fine ware);
w, Red-on-white; x, White-slipped (coarse ware); y, White-slipped (fine ware)

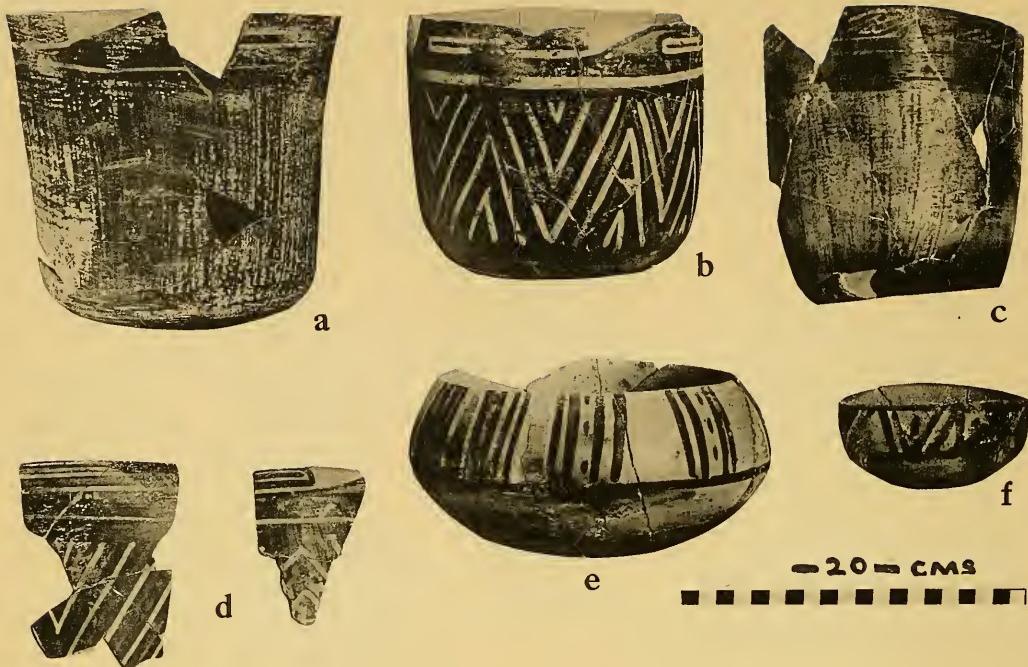


PLATE 6. INTERLOCKING VESSELS AND SHERDS AND "INTERMEDIATE" VESSELS FROM SITE E

a-d, Interlocking type; e, f, Three-color "Intermediate"; g, Interlocking type;
h-l, Interlocking fret designs

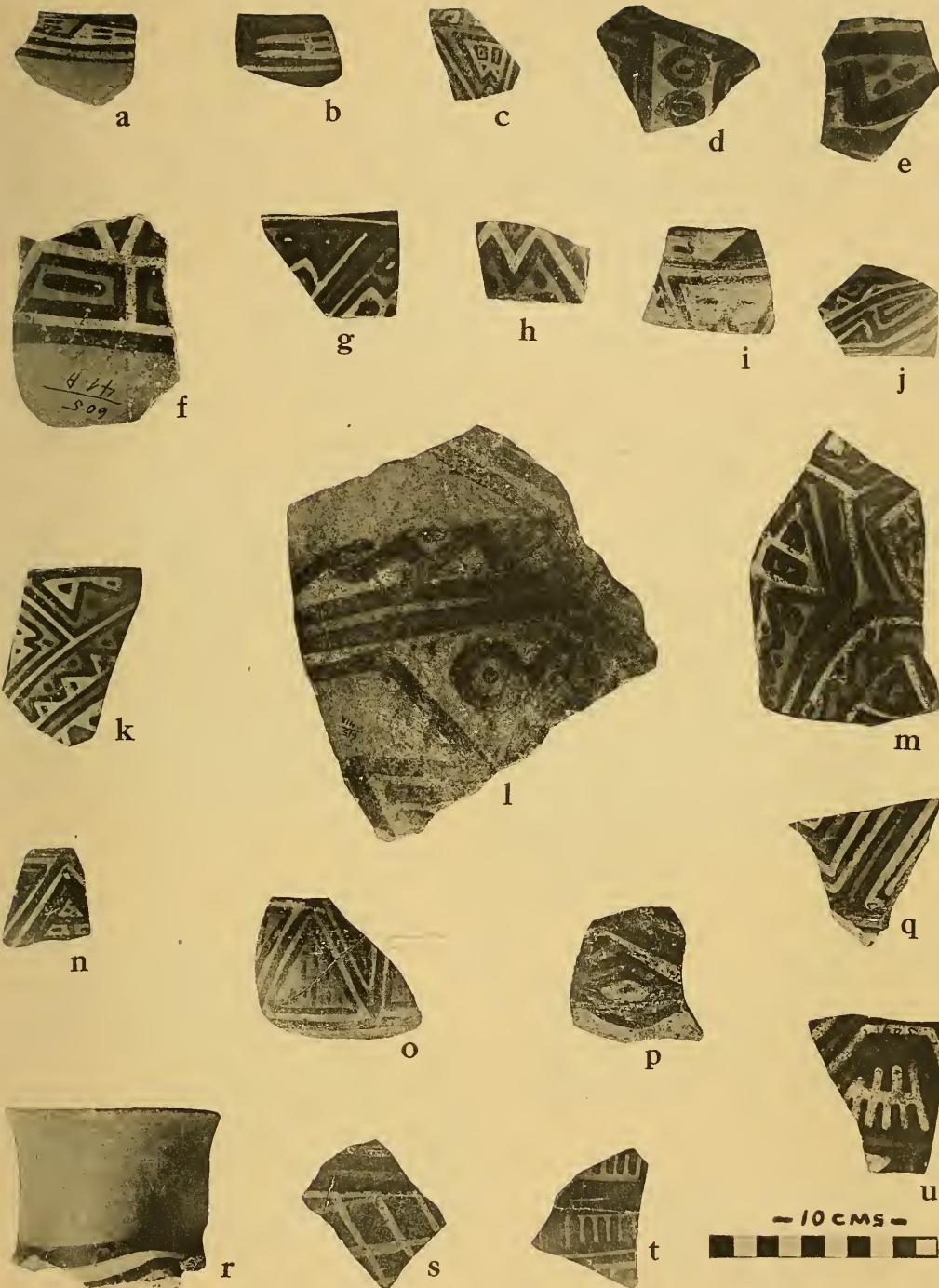


PLATE 7. INTERLOCKING TYPE SHERDS FROM SITE E
Sherd o, a Three-color "Intermediate" fragment

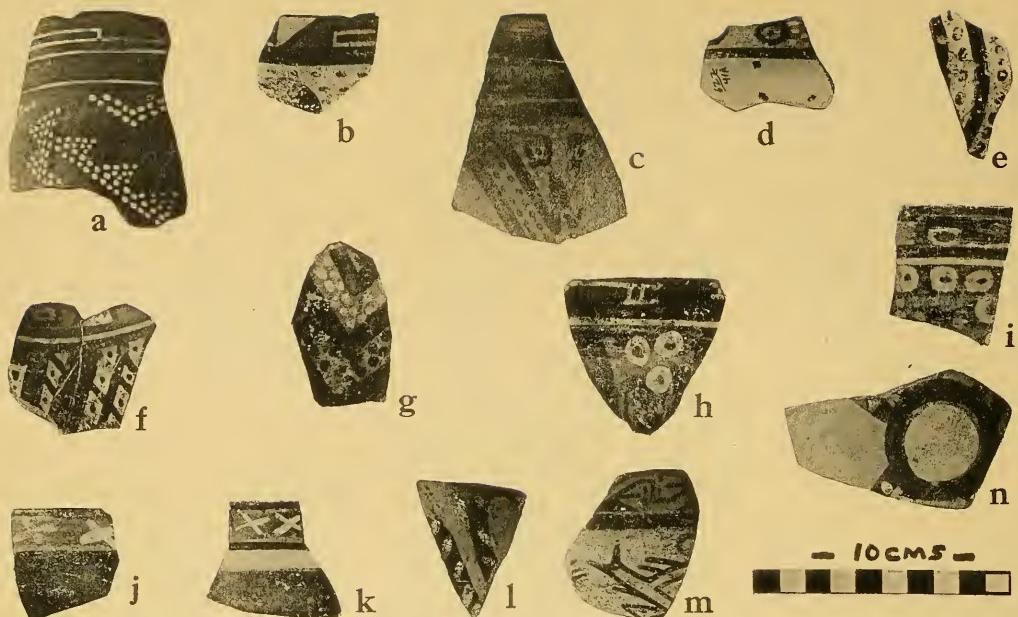


PLATE 8a. MINORITY TYPES OF THE INTERLOCKING STYLE, SITE E
a-g, Dot type; h, i, Circle type; j, k, X-Mark type; l-n, Three-color curvilinear or naturalistic type

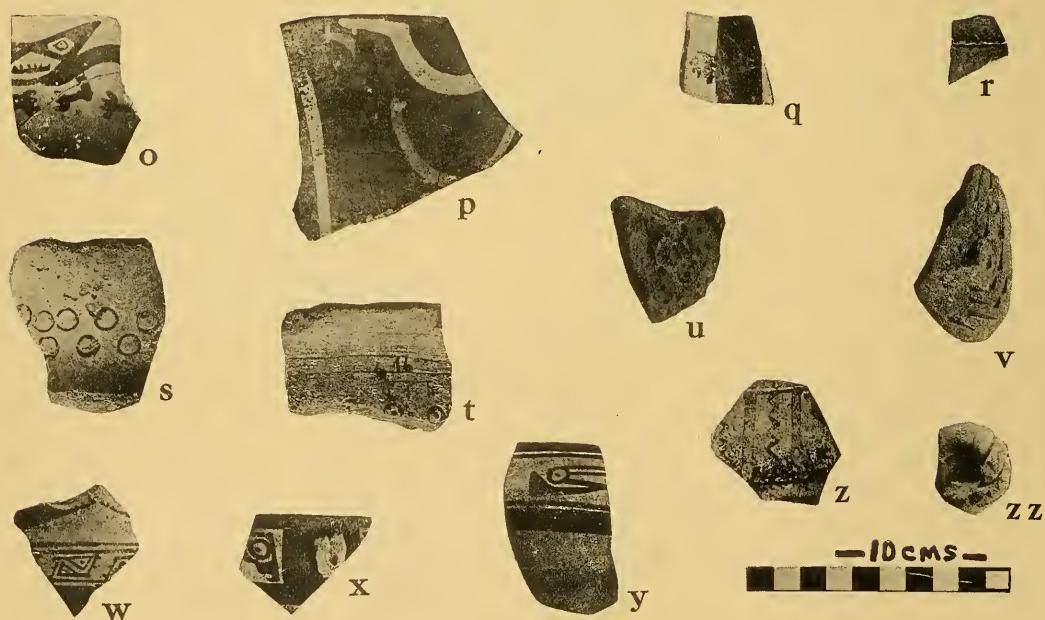
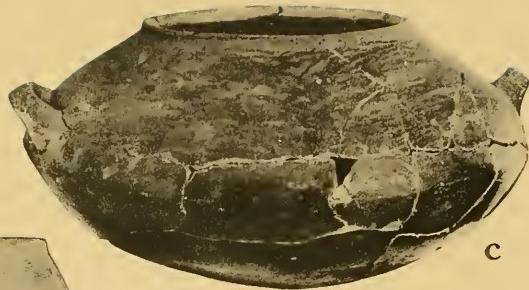


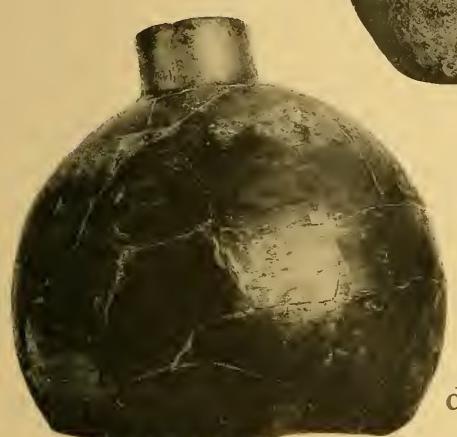
PLATE 8b. VARIOUS DECORATED TYPES FROM SITE E
o, "Recuay cat" design; p, unusual type of White-on-red (?); q, White-zoned (?) sherd of unusually excellent ware quality and colors; r-v, incised and punctuated sherds; w-zz, Late Chancay sherds



a



c

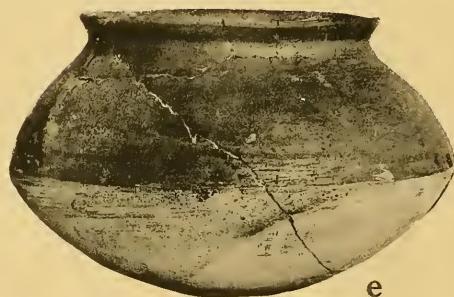


b

- 2.0 CMS -

- 2.0 CMS -

d



e



f



g

- 2.0 -
CMS

PLATE 9. VESSELS FROM BAÑOS DE BOZA

a, b, White-slipped (fine ware); c, e, White-zoned (fine ware); f, g, Smooth plain red;
d, White-zoned (coarse ware)



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